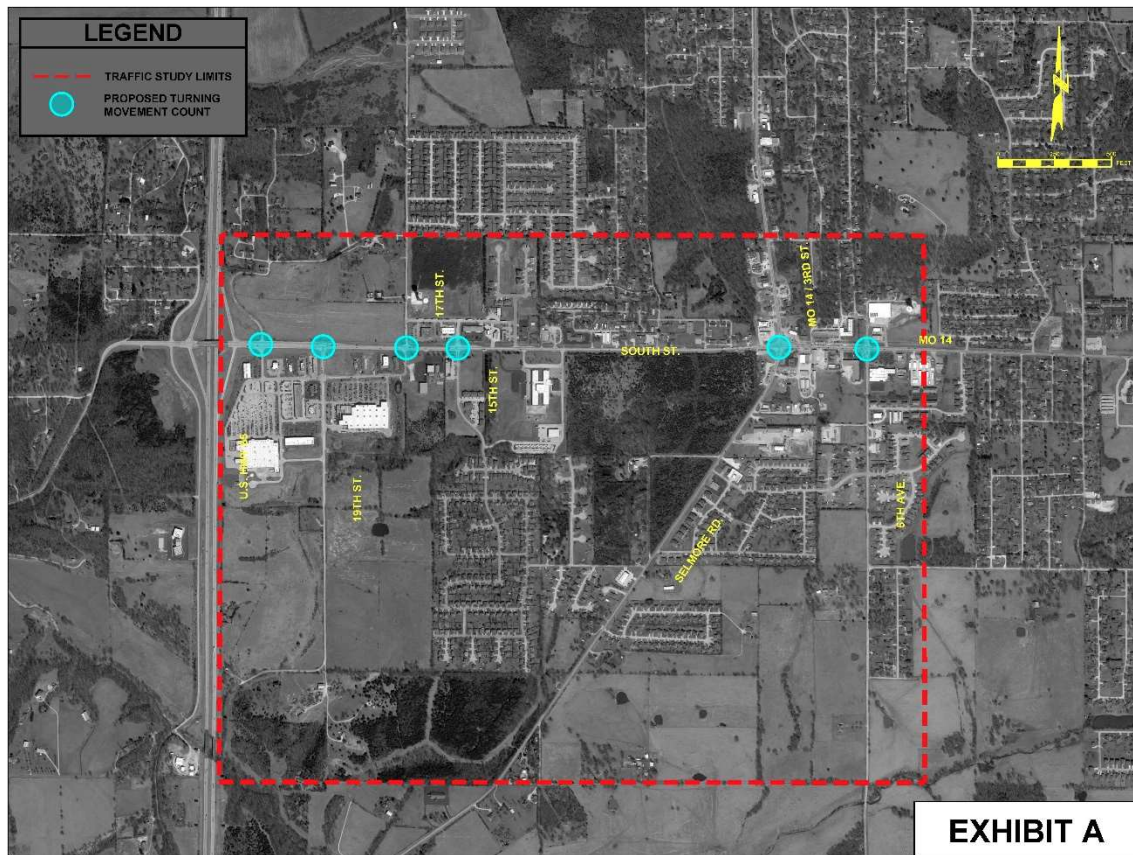




OZARK SOUTH CORRIDOR TRAFFIC STUDY

OZARK, MISSOURI

PREPARED BY:
CRAWFORD, MURPHY & TILLY
JANUARY 2022

Executive Summary

This traffic impact study examines the impacts of background growth and several proposed developments along the South Street (Route 14) corridor in Ozark, MO. There are two proposed developments within the study area: a large 277-acre single family detached housing development and an approximately 51-acre multi-use development with a mix of residential and commercial uses. Traffic from these developments will utilize South Street to travel to and from destinations both in Ozark and beyond.

Traffic models have been created to analyze traffic conditions for the existing (no developments) and proposed (with developments) conditions. Existing models were created for the years 2021, 2023 and 2043, while proposed models were created for 2023 and 2043. The time periods analyzed include AM, PM, and weekend peak hours. Changes in travel patterns due to the proposed developments and traffic scenarios have been projected using existing traffic patterns and engineering judgement.

The traffic from proposed developments within the study area alone does not have a significant effect on the roadway system as it currently functions. However, when combined with background traffic growth over time, several intersections experience unacceptable delays by 2043. As a result, the following roadway improvements are recommended:

- At the intersection of South Street and 15th Street, restrict northbound and southbound left turn and through movements. This can be achieved by directing left turn and through traffic to the intersection of South Street and 17th Street. Southbound traffic can utilize existing roadways to achieve this, while northbound traffic will require a new roadway connection between 15th Street and 17th Street approximately 815 feet in length. The estimated cost for these improvements would be approximately **\$1,010,000**.
- At the intersection of South Street and 20th Street, restrict the southbound left turn movement by directing that small amount of traffic along existing roadways to the signalized intersection of South Street and 17th Street. The estimated cost for these improvements would be approximately **\$8,000**.
- At the intersection of South Street and Salers Lane/Route W, either convert the stop-controlled intersection to a single lane roundabout or install a signal with dedicated left turn lanes. The estimated cost for a signalized intersection would be approximately **\$1,310,000**. The estimated cost for a roundabout at this intersection would be approximately **\$1,020,000**.

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I - Introduction

The purpose of this traffic study is to determine the impacts of planned developments and improvements along the South Street (Route 14) corridor in Ozark, MO. This study is intended to be used as a planning tool to identify potential transportation improvement projects and consider the associated impacts of developments and other infrastructure improvements to the existing transportation network.

The objectives for this analysis include the following:

- Forecast trips generated by proposed developments within the study focus area during the morning, evening, and weekend peak hours
- Distribute the generated trips to the public roadway network based on ADT distributions and the existing directional split of traffic
- Create traffic models including the existing and proposed conditions to determine the impact of the generated trips to the existing roadway network
- Make recommendations for improvements to the roadway network to accommodate the additional traffic from the proposed developments.

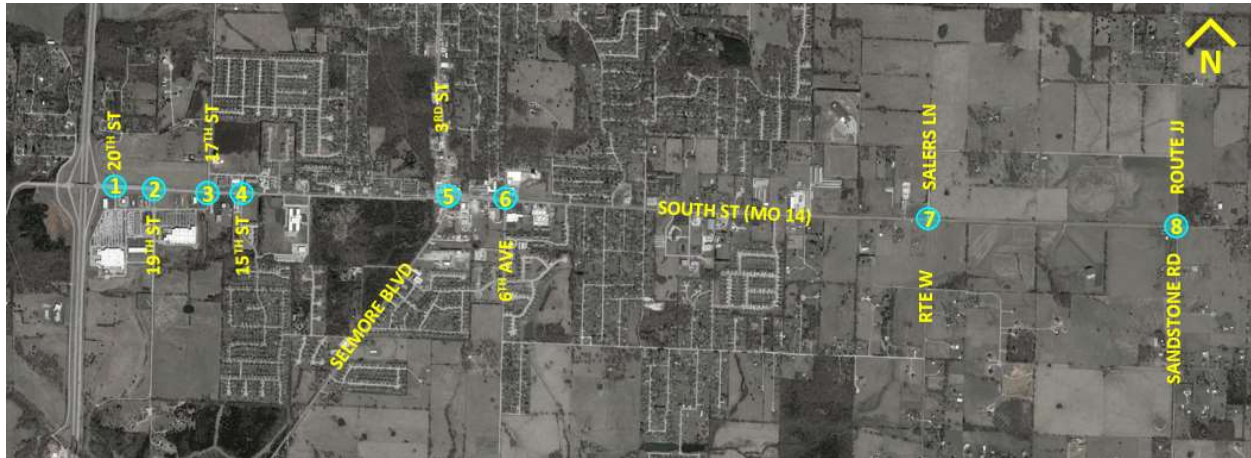
Traffic models have been created to analyze the traffic conditions under the existing and proposed conditions. Several scenarios have been modelled. These traffic scenarios include:

1. 2021 No-Build (existing traffic conditions)
2. 2023 No-Build (traffic conditions with no proposed developments)
3. 2043 No-Build (traffic conditions with no proposed developments)
4. 2023 Build (traffic conditions with proposed development traffic)
5. 2043 Build (traffic conditions with proposed development traffic)

II – Study Area Conditions

The study limits include approximately 1,300 acres, including 1.5 miles of South Street (Route 14). South Street has recently undergone roadway improvements and is now a five-lane section within the study area, with two lanes in each direction and a center two way left turn lane (TWLTL). South Street narrows to a two-lane section just outside the study limits to the east and west. Traffic counts were also collected for two intersections just west of the study area, and those results are discussed in this report.

Description of Study Intersections



This analysis will examine the impacts to the intersections shown in the exhibit above.

(1) **South Street and 20th Street:** A four-way unsignalized intersection approximately 300 feet to the east of the interchange of South Street and US 65. The eastbound approach operates freely and has a dedicated left turn lane and two through lanes with a channelized right turn. The westbound approach operates freely and has two through lanes with no left turn access. The northbound approach is a stop controlled right-in/right-out approach with one dedicated right turn lane. The southbound approach has one shared left/right lane with no through access.

(2) **South Street and 19th Street:** A three-way signalized intersection approximately 1,000 feet east of the intersection of South Street and 20th Street. The eastbound approach has two through lanes with a channelized right turn. The westbound approach has a dedicated left turn lane and two through lanes. The northbound approach has two dedicated left turn lanes and a dedicated channelized right turn lane.

(3) **South Street and 17th Street:** A four-way signalized intersection approximately 1,000 feet east of the intersection of South Street and 19th Street. The eastbound approach has a dedicated left turn lane, a through lane, and a shared through/right lane. The westbound approach has a dedicated left turn lane, a through lane, and a shared through/right lane. The northbound approach has a dedicated left turn lane and a shared through/right lane. The southbound approach has a dedicated left turn lane and a shared through/right lane. There are pedestrian crosswalks provided across all four intersection approaches.

(4) **South Street and 15th Street:** A four-way unsignalized intersection approximately 600 feet east of the intersection of South Street and 17th Street. The eastbound and westbound approaches operate freely, and each have a through lane, a shared through/right lane, and a TWLTL that goes through the

intersection. The northbound and southbound approaches are stop controlled and each have one shared left/through/right lane.

(5) **South Street and 3rd Street/Selmore Boulevard**: A four-way signalized intersection approximately 4,000 feet east of the intersection of South Street and 15th Street. The eastbound and westbound approaches each have one dedicated left turn lane and two through lanes with a channelized right turn. The northbound approach has two dedicated left turn lanes, one through lane, and one dedicated channelized right turn lane. The southbound approach has two dedicated left turn lanes, two through lanes, and one dedicated channelized right turn lane. There are pedestrian crosswalks provided across all four intersection approaches.

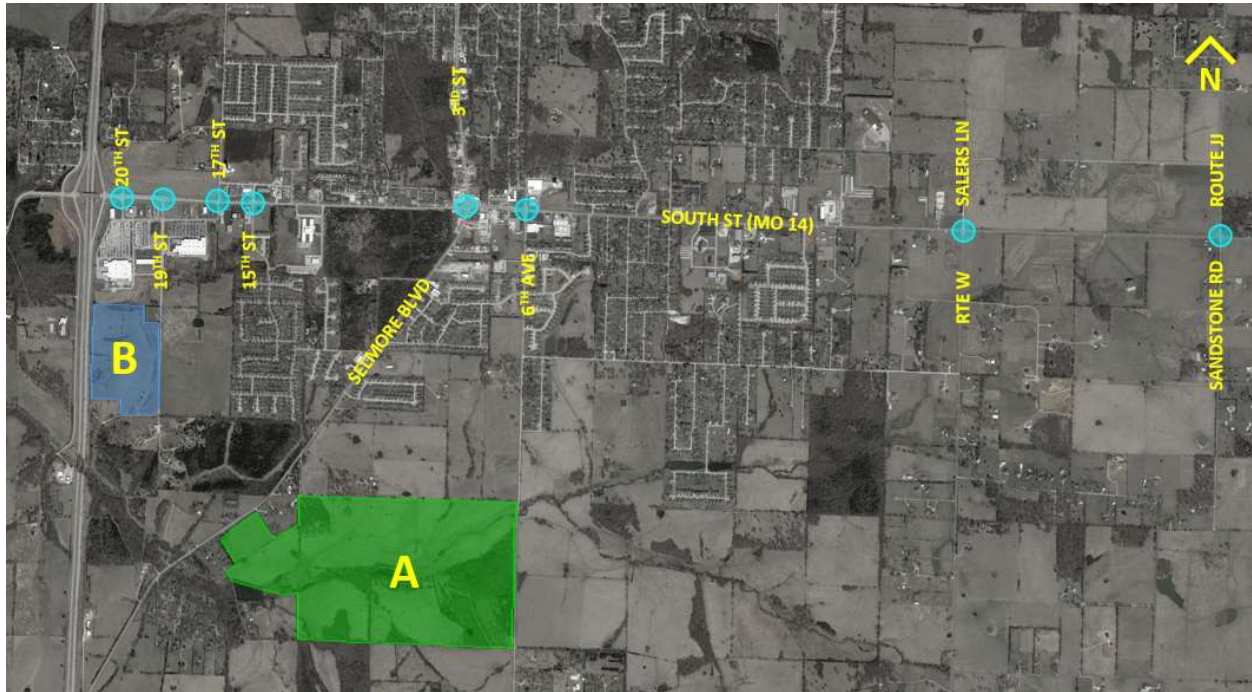
(6) **South Street and 6th Avenue**: A four-way signalized intersection approximately 1,000 feet east of the intersection of South Street and 3rd Street/Selmore Boulevard. The eastbound approach has a dedicated left turn lane, one through lane, and a dedicated channelized right turn lane. The westbound approach has a dedicated left turn lane and a shared through/right lane. The northbound approach has a dedicated left turn lane, one through lane, and a dedicated right turn lane. The southbound approach has a dedicated left turn lane and a shared through/right lane.

(7) **South Street and Route W/Salers Lane**: A four-way unsignalized intersection approximately 8,000 feet east of the intersection of South Street and 6th Avenue. The eastbound and westbound approaches operate freely, and each have one shared left/through/right lane. The northbound and southbound approaches are stop controlled and each have one shared left/through/right lane.

(8) **South Street and Route JJ**: A four-way unsignalized intersection approximately 4,700 feet east of the intersection of South Street and Route W/Salers Lane. The eastbound and westbound approaches operate freely, and each have one shared left/through/right lane. The northbound and southbound approaches are stop controlled and each have one shared left/through/right lane.

Proposed Future Developments

Within the approximately 1,300-acre traffic study limits, the land use is a mix of commercial, residential, and government/institution. The City of Ozark provided a list of proposed developments throughout the city, and it was determined that two of those potential developments fall within this traffic study area.



This analysis will examine the impacts of the developments shown in the exhibit above.

(A) **Single-Family Housing Development:** The preliminary plan for this 277-acre development includes 524 single-family dwelling units to be built in several phases. It would have several entrances along Selmore Road, Minnesota Road, and Elk Valley Road (S 6th Avenue). Since this development is situated south of the Route 14/South Street corridor, the majority of trips generated would utilize Selmore Road, 6th Avenue, and South Street to travel to and from likely destinations.

(B) **Multi-Use Development:** Due to a lack of detailed information about this approximately 51-acre development, the City of Ozark advised using the assumption that 75% of the area would be dedicated to housing, while the remaining 25% would be commercial. Dwelling unit counts and gross leasable area (GLA) needed for trip generation were assumed based on the characteristics of similar nearby developments. Trips generated by this multi-use development would access South Street primarily via 19th Street and would utilize South Street almost exclusively to travel to and from likely destinations.

Existing Traffic Volumes

Traffic counts within the study area were collected in September of 2021 for the weekday and weekend peak hours. Traffic counts were collected at the intersections described previously in the D section of this report.

It was determined that a seasonal adjustment factor was not necessary in this case. Therefore, the traffic counts collected in September 2021 were used as base traffic volumes for this analysis.

Future Traffic Volumes

A 1% annual background growth rate was determined to be appropriate for the study area considering past growth in the area and historical counts performed by the Missouri Department of Transportation.

The one-percent annual growth rate was utilized throughout the study to better determine the impacts of the developments on the roadway network.

III – Development Generated Traffic

Trip Generation

The number of trips generated by a proposed development is a function of land use and development size. The Institute of Transportation Engineers publishes an established compilation of trip data called the *Trip Generation Manual*¹ for various land uses in studies performed across the United States. This enables a traffic studies analyst to forecast traffic based on generation rates comparable to previously constructed sites with similar characteristics when local or established trip generation data is not available.

Table 1 below summarizes the amount of additional traffic that would be generated by the proposed developments, including pass-by trips. If both an average rate and a fitted curve was shown in the *Trip Generation Manual*, the average rate was used to acquire the estimated trip generation.

Table 1

SOUTH STREET DEVELOPMENTS TRIP GENERATION											
DESCRIPTION/ITE CODE	UNITS	EXPECTED UNITS	TOTAL DISTRIBUTION OF GENERATED TRIPS								
			AM IN	AM OUT	AM PASS BY	PM IN	PM OUT	PM PASS BY	WEEKEND IN	WEEKEND OUT	WEEKEND PASS BY
DEVELOPMENT A (SINGLE FAMILY DETACHED HOUSING 210)	DU	524	97	291	0	327	192	0	263	224	0
DEVELOPMENT B RESIDENTIAL (SINGLE FAMILY DETACHED HOUSING 210)	DU	153	28	85	0	95	56	0	77	65	0
DEVELOPMENT B COMMERCIAL (SHOPPING CENTER 820)	KSF	83.5	49	30	27	153	165	108	195	180	128
Total			174	406	27	575	413	108	535	469	128

The time periods used for trip generation were the AM and PM peak hours for a weekday and midday peak hour for a Saturday.

Pass-By Trips

According to the *Trip Generation Handbook*², pass-by trips are made as intermediate stops on the way from an origin to a primary trip destination without a route diversion. They are attracted from existing traffic passing the proposed site on an adjacent street that offers access to the development. As such, pass-by trips are not added to the traffic directly generated by the site in question since they would be on the road network if the site did not exist.

The relative percentage of which trips are pass-by trips was determined by using data from the *Trip Generation Handbook*. Only the commercial portion of the multi-use development is considered a generator of pass-by trips, and the appropriate weekday and weekend rates were applied, as seen below in **Table 2**.

¹ *Trip Generation Manual*, Institute of Transportation Engineers, Tenth Edition, 2017.

² *Trip Generation Handbook*, Institute of Transportation Engineers, Third Edition, 2017.

Table 2

SOUTH STREET DEVELOPMENTS PASS-BY TRIP GENERATION								
DESCRIPTION/ITE CODE	UNITS	EXPECTED UNITS	AM PASS-BY RATE	PM PASS-BY RATE	WEEKEND PASS-BY RATE	PASS-BY TRIPS		
						AM PASS BY	PM PASS BY	WEEKEND PASS BY
DEVELOPMENT B COMMERCIAL (SHOPPING CENTER 820)	KSF ²	83.5	34%	34%	34%	27	108	128

Trip Distribution and Assignment

Trip distribution for the developments included in this analysis was based on two factors: generator type and traffic counts. The generated trips were assigned to turning movements and roadways using a gravity model and the existing traffic patterns. According to the 2019 Ozark Comprehensive Plan, nearly 84% of working Ozark residents commute to another city for work and this fact was considered when determining likely destinations for generated traffic.

Trip assignment involves assigning the generated traffic to the various roadways in the study area, both existing and proposed. This includes both entering and exiting trips in the AM, PM, and weekend peak hours. The trip assignment assumptions were based on logical routing decisions, assumed travel patterns, development locations, and traffic delays.

Traffic maps for the modelled conditions can be seen in **Appendix A**.

IV - Operations

This section details the operation of intersections within the study area. The macroscopic traffic analysis software application Synchro 10 was used to analyze the operation of the study intersections for the AM, PM, and weekend peak hours.

The primary performance measure used in the Highway Capacity Manual (HCM) and the Synchro model to provide a Level of Service (LOS) for signalized and unsignalized intersections is control delay, measured in seconds per vehicle. The LOS rating system describes the operational characteristics of an intersection and ranges from A (free flow, minimal delay) to F (extreme congestion, unacceptable delay). The ranges of control delay used to define LOS are shown in **Table 3**.

Table 3

INTERSECTION LEVEL OF SERVICE (LOS) CRITERIA		
LOS	SIGNALIZED INTERSECTION CONTROL DELAY (sec)	UNSIGNALIZED INTERSECTION CONTROL DELAY (sec)
A	0-10	0-10
B	>10-20	>10-15
C	>20-35	>15-25
D	>35-55	>25-35
E	>55-80	>35-50
F	>80	>50

The Missouri Department of Transportation (MoDOT) typically considers LOS D to be an acceptable level of service for the roadways under their jurisdiction. For the purpose of this analysis, LOS rating of D will be considered the threshold for satisfactory LOS within the study area.

To determine the impact of background growth and development traffic on the existing roadway network, the following traffic models were created:

1. AM, PM, and weekend (WE) scenarios for years 2021, 2023, and 2043 without development, including background growth, and no roadway changes (no-build scenario).
2. AM, PM, and weekend (WE) scenarios for years 2023 and 2043 with development, including background growth, and no roadway changes. For the 2023 models, it was assumed that 20% of the proposed developments would be completed. For the 2043 models, it was assumed that 100% of the proposed developments would be completed.

Existing cycle lengths and left-turn phasing was used for the signalized intersections modeled in Synchro for the 2021 and 2023 no-build and build scenarios. For the 2043 no-build and build scenarios, left-turn phasing was kept the same, but cycle lengths were optimized (with appropriate signal coordination maintained).

No Build Conditions

As a starting point, the existing traffic was grown to reflect the projected traffic for the years 2023 and 2043. The resulting traffic conditions can be seen in **Table 4**.

Table 4

				No Build Conditions					
				2021		2023		2043	
				Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
Intersection									
Signalized	1	South Street & 19th Street	AM	5.2	A	5.2	A	5.3	A
			PM	13.2	B	13.3	B	15.6	B
			WE	13.0	B	13.1	B	13.1	B
	2	South Street & 17th Street	AM	11.8	B	9.3	A	13.4	B
			PM	14.5	B	14.6	B	16.3	B
			WE	16.9	B	17.2	B	22.3	C
	3	South Street & 3rd Street/Selmore	AM	21.9	C	22.1	C	24.3	C
			PM	24.6	C	24.5	C	27.2	C
			WE	21.7	C	21.6	C	23.2	C
	4	South Street & 6th Street	AM	16.5	B	17.0	B	32.4	C
			PM	8.9	A	8.9	A	11.8	B
			WE	11.6	B	12.3	B	8.4	A
Unsignalized	5	South Street & 20th Street	AM	0.2	A	0.2	A	0.3	A
			PM	0.6	A	0.7	A	1.9	A
			WE	0.6	A	0.7	A	0.7	A
	6	South Street & 15th Street	AM	2.6	A	2.8	A	9.8	A
			PM	15.5	C	17.0	C	63.6	F
			WE	3.5	A	3.8	A	12.4	B
	7	South Street & Salers Lane	AM	8.6	A	9.4	A	33.2	D
			PM	3.4	A	3.5	A	8.6	A
			WE	2.8	A	2.9	A	4.6	A
	8	South Street & Hwy JJ	AM	2.9	A	3.0	A	3.7	A
			PM	3.7	A	3.8	A	5.6	A
			WE	2.2	A	2.2	A	2.5	A

The traffic models show that the existing roadway network will generally operate at acceptable levels of service under projected future traffic loads, with the exception of the unsignalized intersection of South Street and 15th Street, which degrades to LOS F in the 2043 PM peak hour. Since the intersection is unsignalized, vehicles waiting to turn onto South Street from the northbound and southbound approaches experience longer control delays as time goes on due to a decrease in acceptable gaps in mainline traffic.

At the unsignalized intersection of South Street and 20th Street, the southbound approach experiences LOS F in the 2043 PM peak hour as vehicles wait to turn left onto South Street. Similarly, the northbound approach to the intersection of South Street and Salers Lane experiences LOS F as a large volume of left turning vehicles must wait for acceptable gaps.

All other intersections operate acceptably in the 2023 and 2043 no-build scenarios. Possible solutions to address these decreases in LOS are discussed in the Roadway Improvements section of this report.

Full intersection analysis reports can be found in Appendix B.

Build Conditions

For the 2023 and 2043 build scenarios, the base traffic was projected, and the additional traffic generated by the proposed developments was added to determine the impact the developments would have on the surrounding roadway system. The results of these analyses can be seen in **Table 5**.

Table 5

				Build Conditions			
				2023		2043	
				Delay (sec)	LOS	Delay (sec)	LOS
Signalized	Intersection						
	1	South Street & 19th Street	AM	5.5	A	6.3	A
			PM	14.1	B	31.2	C
			WE	13.4	B	25.5	C
	2	South Street & 17th Street	AM	9.4	A	14.2	B
			PM	14.7	B	14.4	B
			WE	17.5	B	24.9	C
	3	South Street & 3rd Street/Selmore	AM	22.2	C	26.0	C
			PM	24.6	C	30.4	C
			WE	21.8	C	25.3	C
	4	South Street & 6th Street	AM	17.0	B	36.9	D
			PM	9.0	A	12.2	B
			WE	12.3	B	10.5	B
Unsignalized	5	South Street & 20th Street	AM	0.2	A	0.3	A
			PM	0.6	A	3.2	A
			WE	0.6	A	0.8	A
	6	South Street & 15th Street	AM	3.5	A	13.7	C
			PM	18.3	C	125.0	F
			WE	4.0	A	26.5	D
	7	South Street & Salers Lane	AM	9.4	A	35.7	D
			PM	3.5	A	9.7	A
			WE	2.9	A	4.8	A
	8	South Street & Hwy JJ	AM	3.0	A	3.7	A
			PM	3.7	A	5.8	A
			WE	2.2	A	2.5	A

For the 2023 build models, the largest increase in control delay from the no-build scenario is less than 1.5 seconds. This is expected given that only 20% of proposed development traffic was included in the 2023 models. In the 2043 build scenarios, only two intersections experience an increase in control delay greater than 5 seconds. The first of these is the signalized intersection of South Street and 19th Street, which operates acceptably at LOS C even with the increase in delay. The second is the intersection of South Street and 15th Street, where development traffic exacerbates the issues seen at this intersection in the no-build scenario.

The performance issues at the unsignalized intersection of South Street and 20th Street as well as South Street and Salers Lane persist in the build scenario with slight increases in overall delay.

All other intersections operate acceptably in the 2023 and 2043 build scenarios. Possible solutions to address unacceptable delay values are discussed in the Roadway Improvements section of this report.

Full intersection Synchro analysis reports can be found in Appendix B.

V –Roadway Improvements

Of the eight intersections analyzed in this traffic study, one (South St/15th St) experiences an overall LOS F rating in the 2043 no-build and build scenarios, while two others (South St/20th St and South St/Salers Ln) have approaches with LOS/delay that fall below acceptable levels. Possible roadway improvements for these intersections are discussed below.

South Street and 15th Street

Background traffic growth alone causes this intersection to degrade to LOS F in the 2043 PM peak hour. With added development traffic, delays increase even more, especially for the northbound and southbound approaches. Traffic on the southbound approach has the option to divert to several other South Street access points, including the nearby signalized intersection with 17th Street, but the northbound approach serves as the main access route to South Street for a large existing housing development to the south.

Signalization was considered as a possible solution for improving LOS at this intersection, as the existing 2021 traffic volumes do meet the 8-hour and 4-hour signal warrants. However, the 15th Street intersection is very close to the neighboring 17th Street intersection (only 635 feet) that is already signalized. Even if coordinated, having two busy signalized intersections so close together could result in queue blocking and increased delays.

An alternative solution would be to restrict the northbound and southbound left turn and through movements. This would mean that those approaches would serve only right in, right out, and left in movements. Shifting southbound left turn and through traffic would be simple, as vehicles can utilize Waverly Street to use other South Street access points, including the signalized intersection at 17th Street. As for the northbound approach, shifting left out and through traffic would require a new roadway connection between 17th Street and 15th Street approximately 815 feet in length.

Traffic modeling shows that shifting left out and through movements from 15th Street to 17th Street eliminates unacceptable delay values in the 2043 no-build and build scenarios. 17th Street would experience a slight increase in delay, but overall would still operate at an acceptable level (LOS C at worst). The two stop-controlled intersections created by the new roadway connection between 17th Street and 15th Street would operate at LOS A in all scenarios.

A conceptual design of these improvements is shown in **Appendix D**. The estimated cost for these improvements would be **\$1,010,000**.

South Street and 20th Street

In both the 2043 no-build and build scenarios, southbound traffic experiences LOS F during the PM peak hour. Constructing an additional turn lane would not solve the issue of vehicles waiting for acceptable gaps in mainline traffic, as the left turn movement is what's failing. A solution would be to eliminate the southbound left-turn movement from this intersection and shift that traffic to 17th Street, as vehicles can

utilize Rockhill Road to get there. Since the southbound left turning volume is small, shifting it from 20th Street to 17th Street would not impact LOS at 17th Street. This change would significantly reduce control delay for southbound left turning traffic with little added travel delay.

A conceptual design of these improvements is shown in **Appendix D**. The estimated cost for these improvements would be **\$8,000**.

South Street and Salers Lane

Added development traffic does not have much effect on this intersection, but even in the 2043 no-build condition the northbound approach experiences LOS F. This is due to a high proportion of left turning vehicles waiting for acceptable gaps at the two-way stop-controlled intersection. Since the majority of impacted traffic is turning left, adding a northbound left turn lane would have little effect. There are two possible solutions to improve LOS at this intersection: convert to a signalized intersection or convert to roundabout.

The existing 2021 traffic counts do meet the 8-hour and 4-hour signal warrants, and the intersection is far enough away from other signalized intersections that it could operate effectively as uncoordinated. The intersection could operate acceptably in the 2043 build condition with just a shared left/through/right lane in each direction, but the recommendation would be to provide a dedicated left turn lane with permitted left turn phasing on each approach in case traffic patterns change in the future. Signalization at this location would improve overall LOS to A in all scenarios, with all movements operating at LOS B or better.

Another very effective solution would be to install a roundabout at this location. A single lane roundabout would achieve similar results to signalization in the 2043 build scenario, with the added benefit of not needing to maintain a signal. A roundabout at this location would improve overall LOS to A in all scenarios, with all movements operating at LOS B or better.

A conceptual design of these improvements is shown in **Appendix D**. The estimated cost for a signalized intersection would be **\$1,310,000**. The estimated cost for a roundabout would be **\$1,020,000**.

Synchro model reports and signal warrant analyses for these geometric changes can be found in **Appendix B and C**.

VI - Conclusions

The traffic models show that the roadway network in the study area currently operates at acceptable levels of service. These acceptable levels maintain through the 2023 traffic projections, but by 2043 three of the study intersections experience unacceptable delays, even without additional development traffic.

The following roadway improvements are recommended to address unacceptable levels of service in the 2043 no-build and build scenarios:

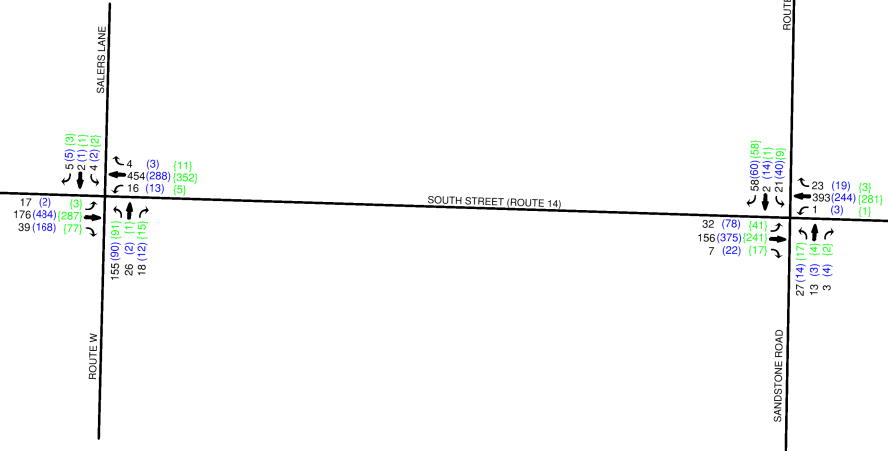
- At the intersection of South Street and 15th Street, restrict northbound and southbound left turn and through movements. This can be achieved by directing left turn and through traffic to the intersection of South Street and 17th Street. Southbound traffic can utilize existing roadways to achieve this, while northbound traffic will require a new roadway connection between 15th Street and 17th Street approximately 815 feet in length.
- At the intersection of South Street and 20th Street, restrict the southbound left turn movement by directing that small amount of traffic along existing roadways to the signalized intersection of South Street and 17th Street.
- At the intersection of South Street and Salers Lane/Route W, either convert the stop-controlled intersection to a single lane roundabout or install a signal with dedicated left turn lanes.

Appendix A

Traffic Volume Maps

MATCHLINE

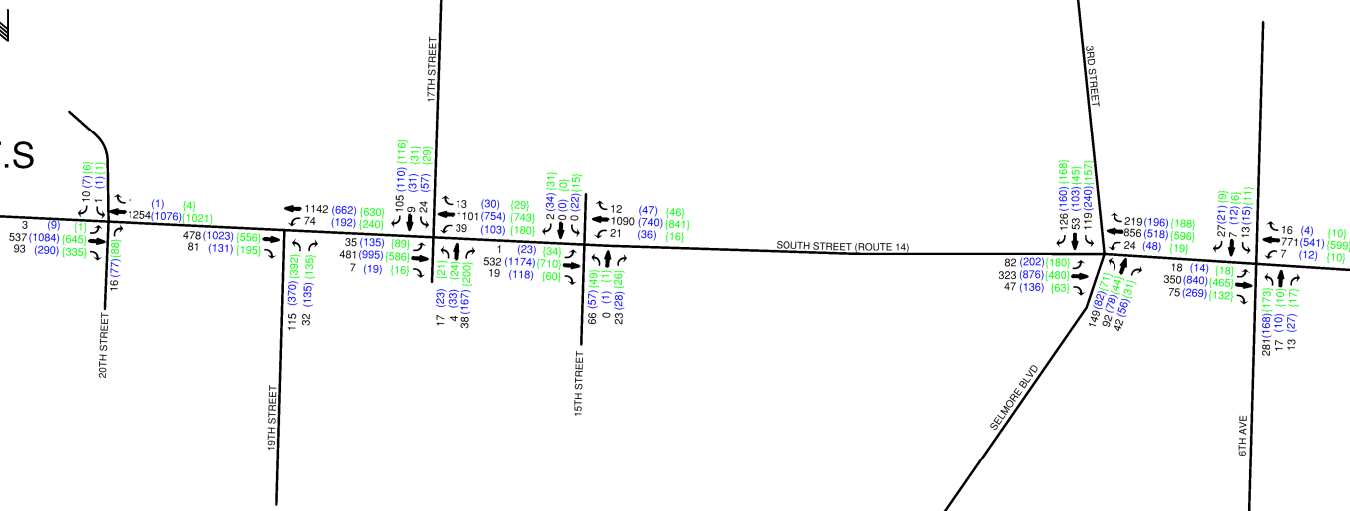
N.T.S



LEGEND

AM (PM) (SAT) PEAK HOUR TRAFFIC VOLUME

N.T.S



MATCHLINE

EXHIBIT 1

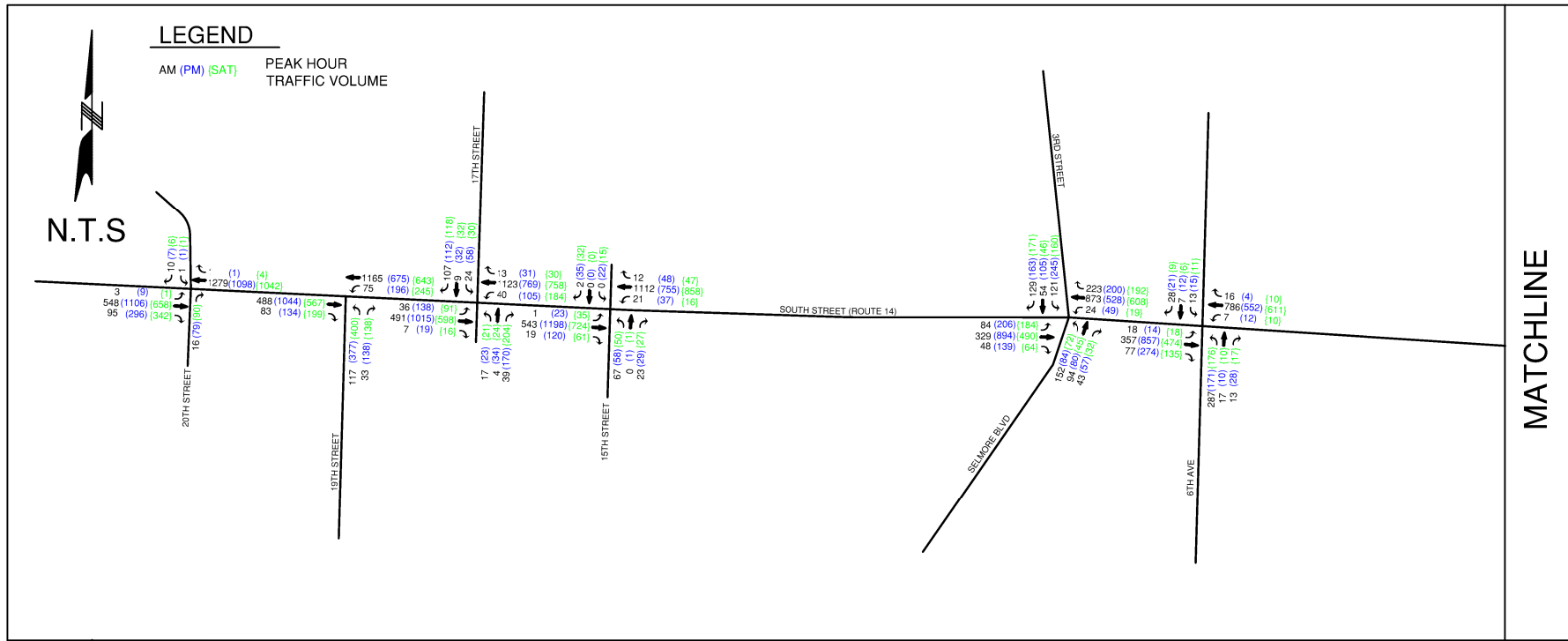
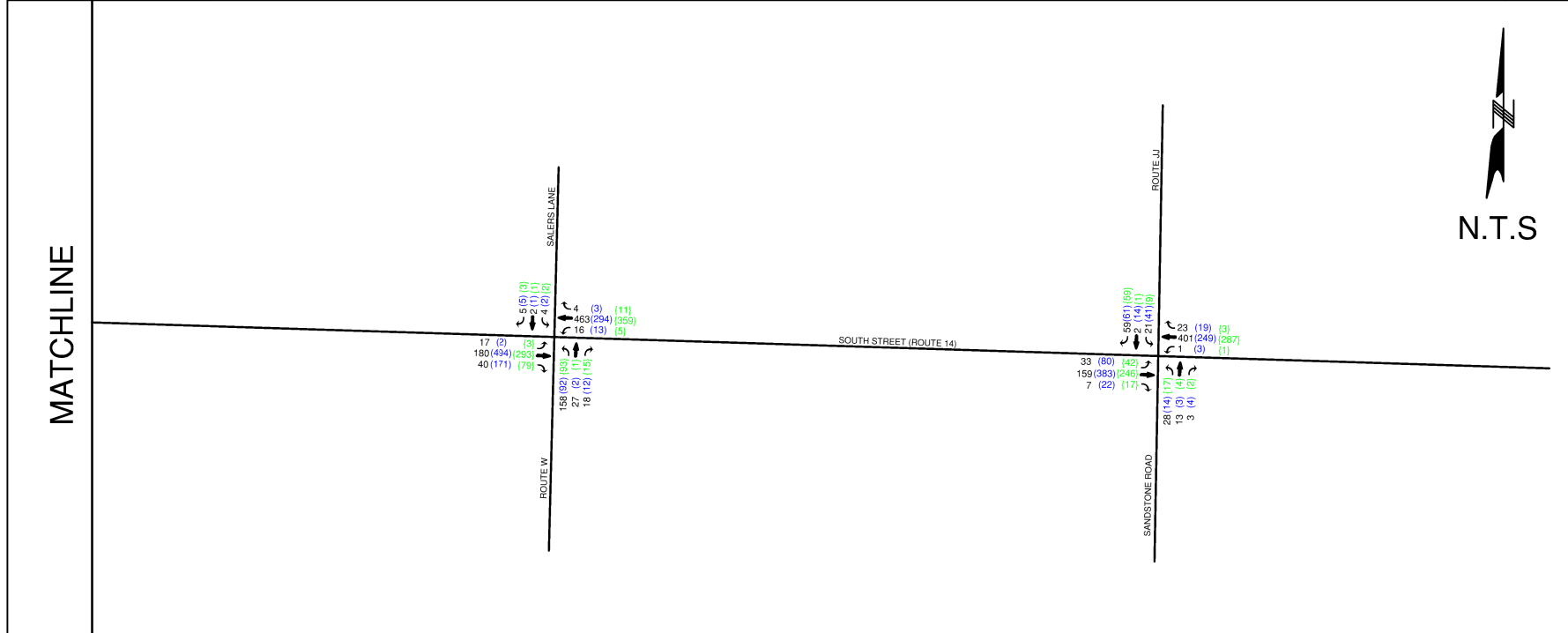
PEAK HOUR TRAFFIC COUNTS
EXISTING YEAR 2021

OZARK, MO

CHRISTIAN COUNTY

DECEMBER 23, 2021





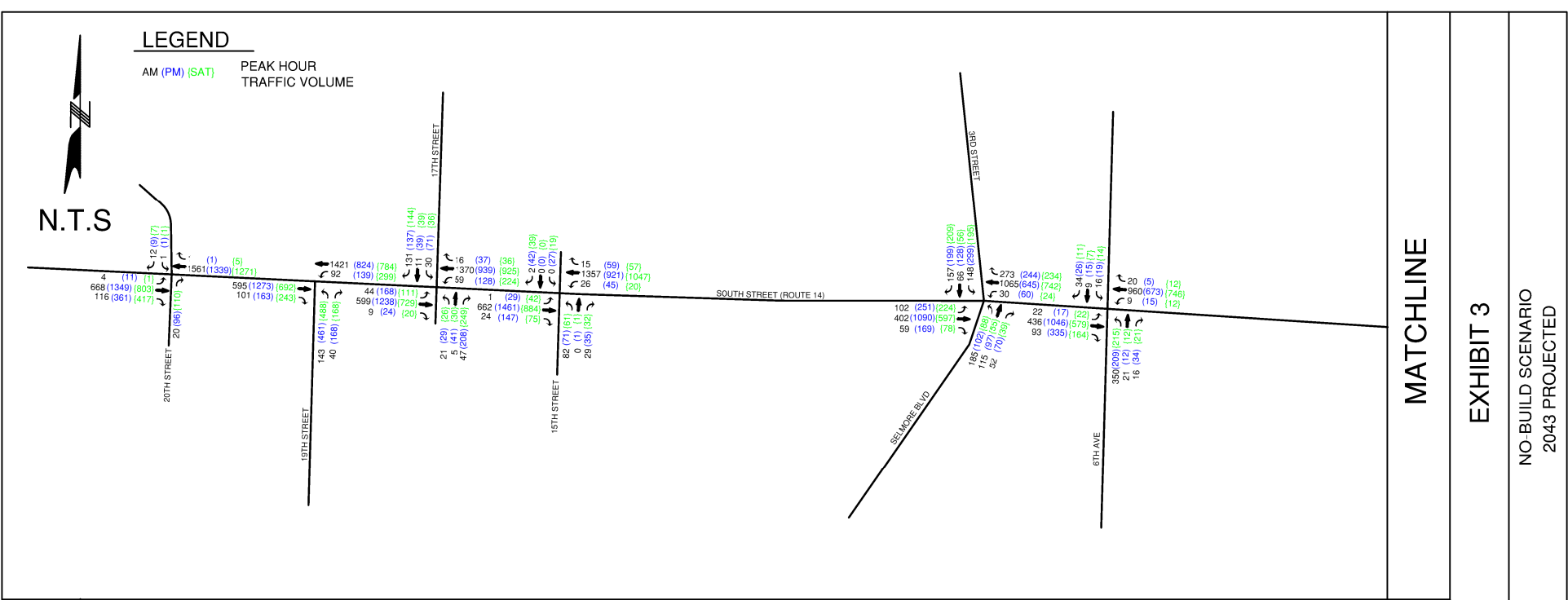
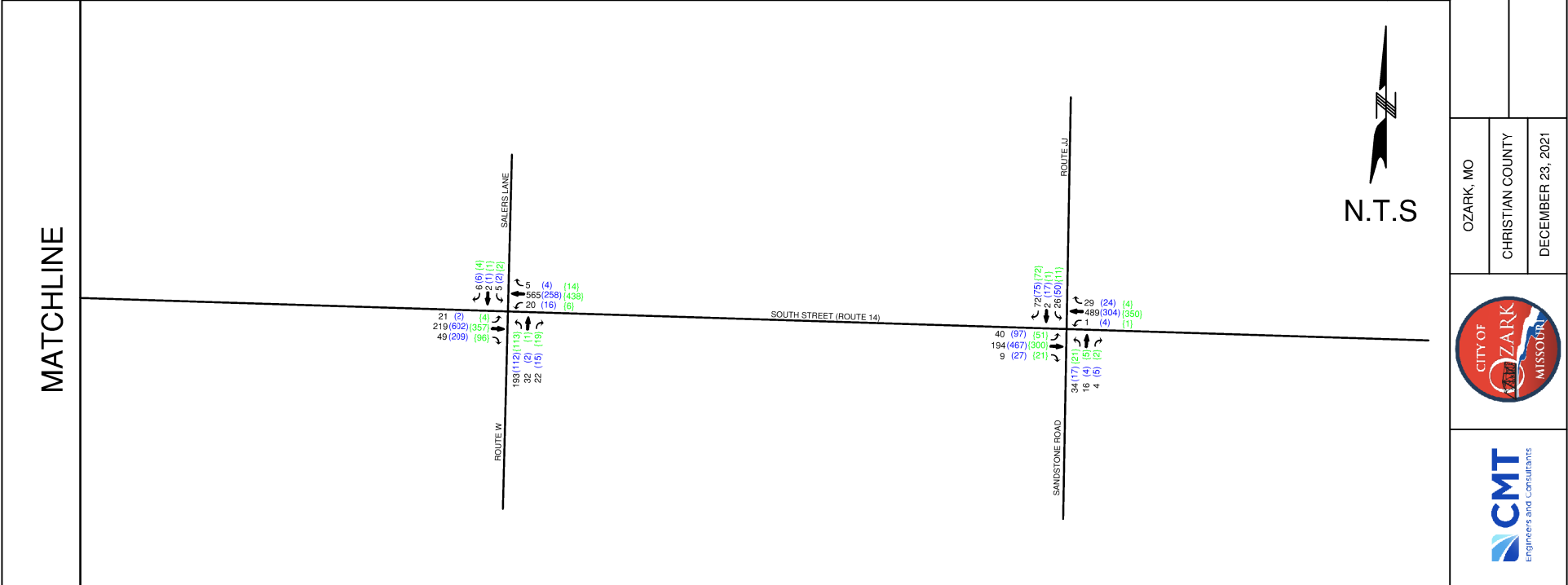
MATCHLINE

OZARK, MO



EXHIBIT 2

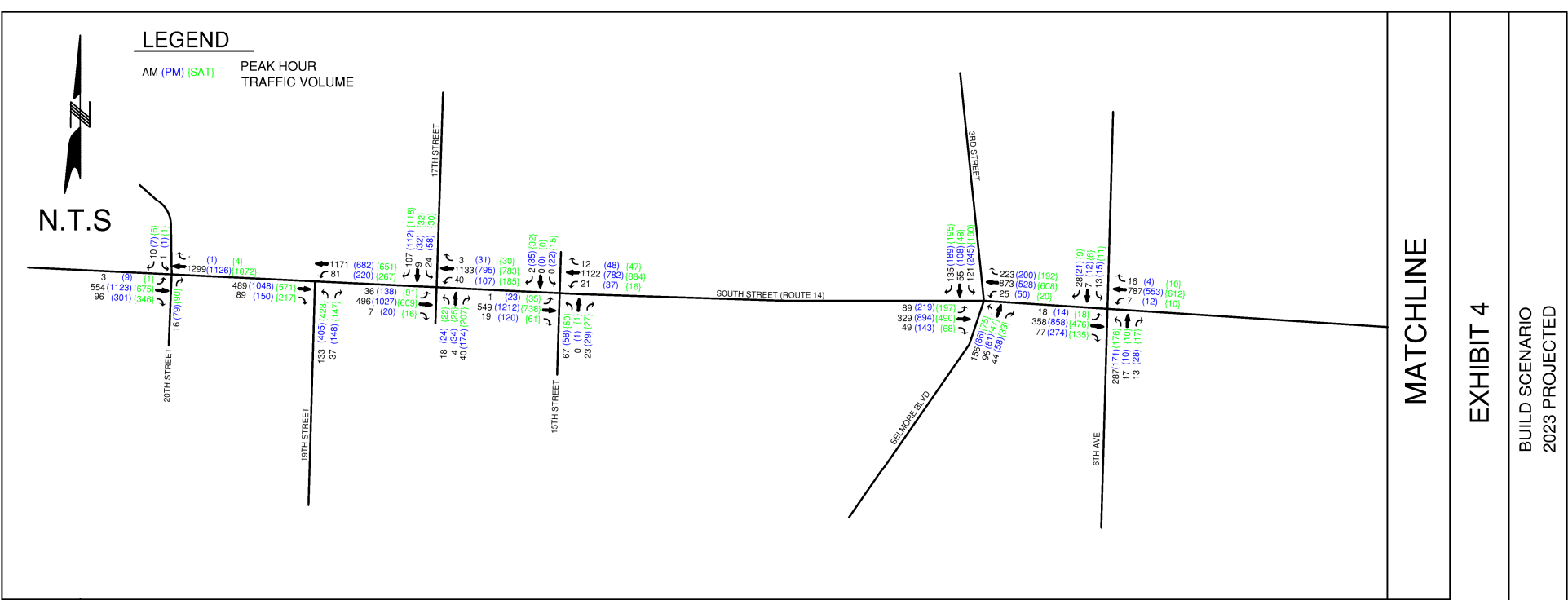
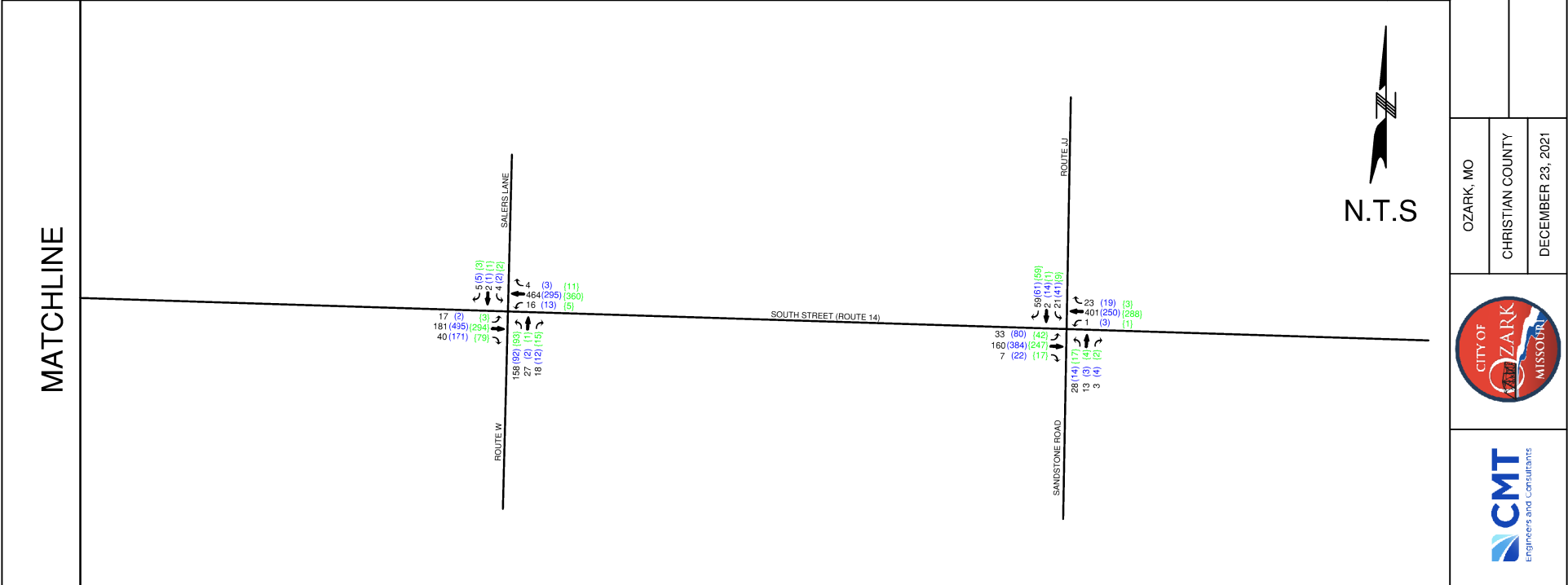
NO-BUILD SCENARIO
2023 PROJECTED



OZARK, MO
CHRISTIAN COUNTY
DECEMBER 23, 2021

EXHIBIT 3

NO-BUILD SCENARIO
2043 PROJECTED





CMT
Engineers and Consultants



CITY OF OZARK MISSOURI

OZARK, MO

CHRISTIAN COUNTY

DECEMBER 23, 2021

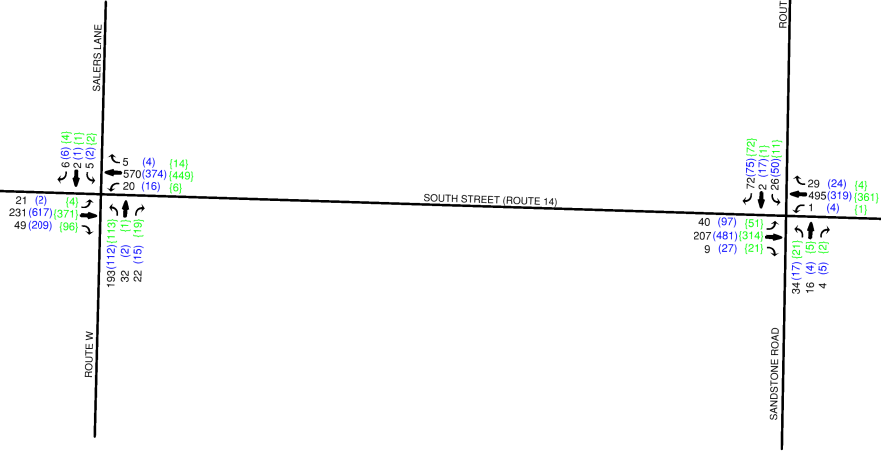
EXHIBIT 4

BUILD SCENARIO

2023 PROJECTED

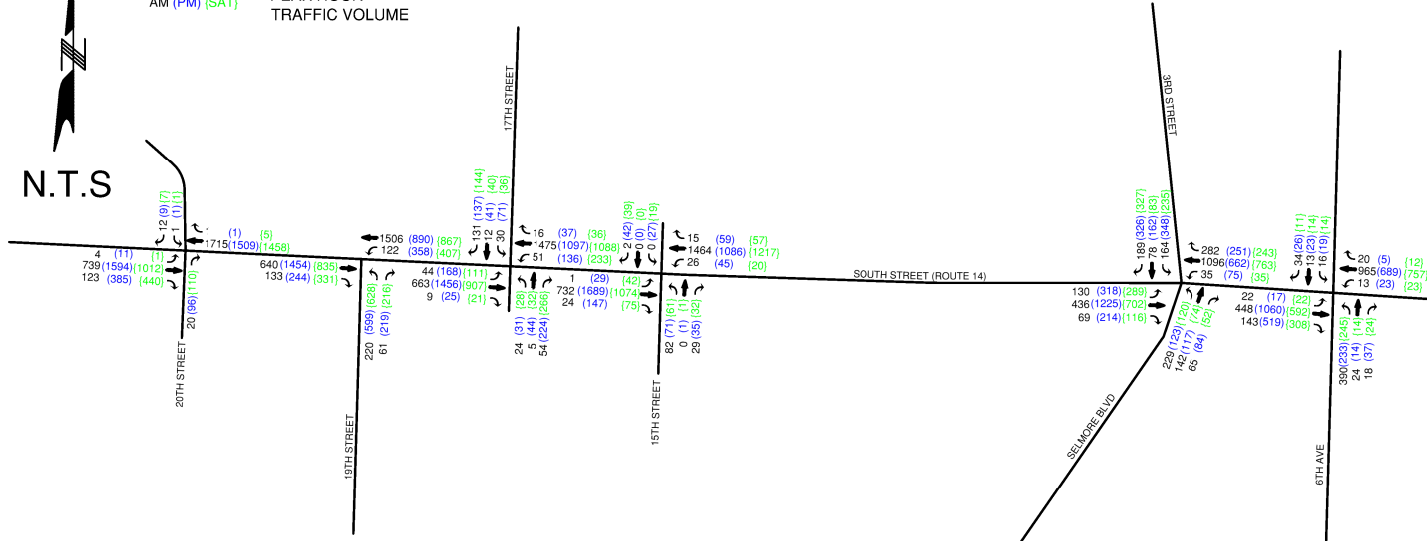
MATCHLINE

N.T.S



LEGEND
 AM (PM) SAT
 PEAK HOUR
 TRAFFIC VOLUME

N.T.S



MATCHLINE

OZARK, MO

CHRISTIAN COUNTY

DECEMBER 23, 2021



EXHIBIT 5

BUILD SCENARIO
 2043 PROJECTED

Appendix B

Synchro Traffic Reports

HCM 6th Signalized Intersection Summary

14: 3rd St & South St

12/23/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	82	323	47	24	856	219	149	92	42	119	53	126
Future Volume (veh/h)	82	323	47	24	856	219	149	92	42	119	53	126
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	89	351	0	26	930	0	162	100	0	129	58	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	363	1915		621	1844		229	362		193	650	
Arrive On Green	0.05	0.54	0.00	0.03	0.52	0.00	0.07	0.19	0.00	0.06	0.18	0.00
Sat Flow, veh/h	1767	3618	0	1767	3618	0	3428	1856	1572	3428	3526	1572
Grp Volume(v), veh/h	89	351	0	26	930	0	162	100	0	129	58	0
Grp Sat Flow(s),veh/h/ln	1767	1763	0	1767	1763	0	1714	1856	1572	1714	1763	1572
Q Serve(g_s), s	2.3	5.1	0.0	0.7	17.1	0.0	4.6	4.6	0.0	3.7	1.4	0.0
Cycle Q Clear(g_c), s	2.3	5.1	0.0	0.7	17.1	0.0	4.6	4.6	0.0	3.7	1.4	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	363	1915		621	1844		229	362		193	650	
V/C Ratio(X)	0.25	0.18		0.04	0.50		0.71	0.28		0.67	0.09	
Avail Cap(c_a), veh/h	443	1915		665	1844		333	362		291	650	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.57	0.57	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	11.5	11.6	0.0	10.4	15.4	0.0	45.7	34.2	0.0	46.3	33.8	0.0
Incr Delay (d2), s/veh	0.3	0.2	0.0	0.0	0.6	0.0	4.0	1.9	0.0	4.0	0.3	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	0.8	1.8	0.0	0.2	6.3	0.0	2.1	2.2	0.0	1.7	0.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.9	11.8	0.0	10.4	16.0	0.0	49.7	36.1	0.0	50.3	34.1	0.0
LnGrp LOS	B	B		B	B		D	D		D	C	
Approach Vol, veh/h	440		A	956		A	262		A	187		A
Approach Delay, s/veh	11.8			15.9			44.5			45.3		
Approach LOS	B			B			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.1	58.8	11.2	22.9	9.1	56.8	10.1	24.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.1	48.9	9.7	18.3	9.1	44.9	8.5	19.5				
Max Q Clear Time (g_c+l1), s	2.7	7.1	6.6	3.4	4.3	19.1	5.7	6.6				
Green Ext Time (p_c), s	0.0	2.2	0.1	0.2	0.1	6.5	0.1	0.3				

Intersection Summary

HCM 6th Ctrl Delay	21.9
HCM 6th LOS	C

Notes

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

HCM 6th Signalized Intersection Summary

17: 6th St & South St

12/23/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	350	75	7	771	16	281	17	13	13	7	27
Future Volume (veh/h)	18	350	75	7	771	16	281	17	13	13	7	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	20	380	0	8	838	17	305	18	14	14	8	29
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	294	1203		717	1175	24	404	485	411	419	92	333
Arrive On Green	1.00	1.00	0.00	0.65	0.65	0.65	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	640	1856	1572	995	1812	37	1360	1856	1572	1366	352	1275
Grp Volume(v), veh/h	20	380	0	8	0	855	305	18	14	14	0	37
Grp Sat Flow(s),veh/h/ln	640	1856	1572	995	0	1849	1360	1856	1572	1366	0	1626
Q Serve(g_s), s	1.5	0.0	0.0	0.3	0.0	30.2	21.8	0.7	0.7	0.8	0.0	1.7
Cycle Q Clear(g_c), s	31.8	0.0	0.0	0.3	0.0	30.2	23.6	0.7	0.7	1.5	0.0	1.7
Prop In Lane	1.00		1.00	1.00		0.02	1.00		1.00	1.00		0.78
Lane Grp Cap(c), veh/h	294	1203		717	0	1199	404	485	411	419	0	425
V/C Ratio(X)	0.07	0.32		0.01	0.00	0.71	0.75	0.04	0.03	0.03	0.00	0.09
Avail Cap(c_a), veh/h	294	1203		717	0	1199	477	584	495	492	0	512
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.97	0.97	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.4	0.0	0.0	6.2	0.0	11.5	36.8	27.5	27.5	28.1	0.0	27.9
Incr Delay (d2), s/veh	0.4	0.7	0.0	0.0	0.0	2.0	5.7	0.0	0.0	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.2	0.0	0.1	0.0	10.6	7.8	0.3	0.3	0.3	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.8	0.7	0.0	6.2	0.0	13.5	42.5	27.6	27.5	28.1	0.0	28.0
LnGrp LOS	A	A		A	A	B	D	C	C	C	A	C
Approach Vol, veh/h	400		A	863			337			51		
Approach Delay, s/veh	1.0			13.4			41.1			28.0		
Approach LOS	A			B			D			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	69.4			30.6			69.4			30.6		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	59.5			31.5			59.5			31.5		
Max Q Clear Time (g_c+I1), s	33.8			3.7			32.2			25.6		
Green Ext Time (p_c), s	2.3			0.2			6.5			0.6		

Intersection Summary

HCM 6th Ctrl Delay 16.5

HCM 6th LOS B

Notes

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

HCM 6th Signalized Intersection Summary

7: 19th St & South St

12/23/2021

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↖	↑↑	↖↗	↗
Traffic Volume (veh/h)	478	81	74	1142	115	32
Future Volume (veh/h)	478	81	74	1142	115	32
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	520	0	80	1241	125	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	2134		621	2450	737	
Arrive On Green	0.61	0.00	0.09	1.00	0.22	0.00
Sat Flow, veh/h	3711	0	1767	3618	3428	1572
Grp Volume(v), veh/h	520	0	80	1241	125	0
Grp Sat Flow(s),veh/h/ln	1763	0	1767	1763	1714	1572
Q Serve(g_s), s	6.8	0.0	1.6	0.0	3.0	0.0
Cycle Q Clear(g_c), s	6.8	0.0	1.6	0.0	3.0	0.0
Prop In Lane		0.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2134		621	2450	737	
V/C Ratio(X)	0.24		0.13	0.51	0.17	
Avail Cap(c_a), veh/h	2134		710	2450	737	
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.82	0.82	1.00	0.00
Uniform Delay (d), s/veh	9.1	0.0	5.8	0.0	32.0	0.0
Incr Delay (d2), s/veh	0.3	0.0	0.1	0.6	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	0.5	0.2	1.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	9.4	0.0	5.9	0.6	32.5	0.0
LnGrp LOS	A		A	A	C	
Approach Vol, veh/h	520	A		1321	125	A
Approach Delay, s/veh	9.4			0.9	32.5	
Approach LOS	A			A	C	
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.0	65.0		26.0		74.0
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s	9.5	55.5		21.5		69.5
Max Q Clear Time (g_c+I1), s	3.6	8.8		5.0		2.0
Green Ext Time (p_c), s	0.1	3.5		0.3		11.6
Intersection Summary						
HCM 6th Ctrl Delay			5.2			
HCM 6th LOS			A			

Notes

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

HCM 6th Signalized Intersection Summary

8: 17th St & South St

12/23/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	481	7	39	1101	13	17	4	38	24	9	105
Future Volume (veh/h)	35	481	7	39	1101	13	17	4	38	24	9	105
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	38	523	8	42	1197	14	18	4	41	26	10	114
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	324	2188	33	666	2204	26	259	30	312	332	28	315
Arrive On Green	0.07	1.00	1.00	0.03	0.62	0.62	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	1767	3554	54	1767	3569	42	1257	142	1452	1350	128	1464
Grp Volume(v), veh/h	38	259	272	42	591	620	18	0	45	26	0	124
Grp Sat Flow(s),veh/h/ln	1767	1763	1846	1767	1763	1848	1257	0	1594	1350	0	1592
Q Serve(g_s), s	0.8	0.0	0.0	0.9	19.3	19.3	1.2	0.0	2.3	1.6	0.0	6.6
Cycle Q Clear(g_c), s	0.8	0.0	0.0	0.9	19.3	19.3	7.9	0.0	2.3	3.9	0.0	6.6
Prop In Lane	1.00		0.03	1.00		0.02	1.00		0.91	1.00		0.92
Lane Grp Cap(c), veh/h	324	1085	1136	666	1088	1141	259	0	343	332	0	342
V/C Ratio(X)	0.12	0.24	0.24	0.06	0.54	0.54	0.07	0.00	0.13	0.08	0.00	0.36
Avail Cap(c_a), veh/h	381	1085	1136	720	1088	1141	259	0	343	332	0	342
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.97	0.97	0.97	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.0	0.0	0.0	6.3	11.0	11.0	36.8	0.0	31.7	33.3	0.0	33.4
Incr Delay (d2), s/veh	0.2	0.5	0.5	0.0	1.9	1.9	0.5	0.0	0.8	0.5	0.0	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.2	0.2	0.3	6.9	7.2	0.4	0.0	1.0	0.6	0.0	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.2	0.5	0.5	6.3	13.0	12.9	37.3	0.0	32.5	33.7	0.0	36.4
LnGrp LOS	A	A	A	A	B	B	D	A	C	C	A	D
Approach Vol, veh/h	569				1253				63			
Approach Delay, s/veh	1.0				12.7				33.9			
Approach LOS	A				B				C			
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.9	66.1		26.0	7.8	66.2		26.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	6.5	58.5		21.5	6.5	58.5		21.5				
Max Q Clear Time (g_c+I1), s	2.9	2.0		8.6	2.8	21.3		9.9				
Green Ext Time (p_c), s	0.0	3.1		0.6	0.0	9.1		0.1				
Intersection Summary												
HCM 6th Ctrl Delay	11.8											
HCM 6th LOS	B											

HCM 6th TWSC
3: 20th St & South St

12/23/2021

Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	537	93	0	1254	1	0	0	16	1	0	10
Future Vol, veh/h	3	537	93	0	1254	1	0	0	16	1	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Free	-	-	None	-	-	Yield	-	-	None
Storage Length	200	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	3	584	101	0	1363	1	0	0	17	1	0	11

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	1364	0	-	0
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.16	-	-	6.96
Critical Hdwy Stg 1	-	-	-	6.56
Critical Hdwy Stg 2	-	-	-	6.56
Follow-up Hdwy	2.23	-	-	3.33
Pot Cap-1 Maneuver	494	0	0	701
Stage 1	-	0	0	154
Stage 2	-	0	0	683
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	494	-	-	701
Mov Cap-2 Maneuver	-	-	-	61
Stage 1	-	-	-	153
Stage 2	-	-	-	662

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	10.3	19.4
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	701	494	-	-	-	262
HCM Lane V/C Ratio	0.025	0.007	-	-	-	0.046
HCM Control Delay (s)	10.3	12.3	-	-	-	19.4
HCM Lane LOS	B	B	-	-	-	C
HCM 95th %tile Q(veh)	0.1	0	-	-	-	0.1

Intersection												
Int Delay, s/veh	2.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	532	19	21	1090	12	66	0	23	0	0	2
Future Vol, veh/h	1	532	19	21	1090	12	66	0	23	0	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	-	200	-	-	100	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	1	578	21	23	1185	13	72	0	25	0	0	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1198	0	0	599	0	0	1230	1835	300	1529	1839	599
Stage 1	-	-	-	-	-	-	591	591	-	1238	1238	-
Stage 2	-	-	-	-	-	-	639	1244	-	291	601	-
Critical Hdwy	4.16	-	-	4.16	-	-	7.56	6.56	6.96	7.56	6.56	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-	6.56	5.56	-	6.56	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.56	5.56	-	6.56	5.56	-
Follow-up Hdwy	2.23	-	-	2.23	-	-	3.53	4.03	3.33	3.53	4.03	3.33
Pot Cap-1 Maneuver	573	-	-	967	-	-	133	74	693	79	74	442
Stage 1	-	-	-	-	-	-	458	490	-	185	244	-
Stage 2	-	-	-	-	-	-	428	242	-	690	485	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	573	-	-	967	-	-	130	72	693	75	72	442
Mov Cap-2 Maneuver	-	-	-	-	-	-	130	72	-	75	72	-
Stage 1	-	-	-	-	-	-	457	489	-	185	238	-
Stage 2	-	-	-	-	-	-	416	236	-	664	484	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.2			49			13.2		
HCM LOS							E			B		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	130	693	573	-	-	967	-	-	442
HCM Lane V/C Ratio	0.552	0.036	0.002	-	-	0.024	-	-	0.005
HCM Control Delay (s)	62.4	10.4	11.3	-	-	8.8	-	-	13.2
HCM Lane LOS	F	B	B	-	-	A	-	-	B
HCM 95th %tile Q(veh)	2.7	0.1	0	-	-	0.1	-	-	0

HCM 6th TWSC
20: Hwy W/Salers Ln & South St

12/23/2021

Intersection												
Int Delay, s/veh	8.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	17	176	39	16	454	4	155	26	18	4	2	5
Future Vol, veh/h	17	176	39	16	454	4	155	26	18	4	2	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	18	191	42	17	493	4	168	28	20	4	2	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	497	0	0	233	0	0	781	779	212	801	798	495
Stage 1	-	-	-	-	-	-	248	248	-	529	529	-
Stage 2	-	-	-	-	-	-	533	531	-	272	269	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1062	-	-	1329	-	-	311	326	826	301	318	573
Stage 1	-	-	-	-	-	-	754	699	-	531	526	-
Stage 2	-	-	-	-	-	-	529	524	-	732	685	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1062	-	-	1329	-	-	298	314	826	266	306	573
Mov Cap-2 Maneuver	-	-	-	-	-	-	298	314	-	266	306	-
Stage 1	-	-	-	-	-	-	739	685	-	520	517	-
Stage 2	-	-	-	-	-	-	512	515	-	671	671	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.6			0.3			37.1			15.3		
HCM LOS							E			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	319	1062	-	-	1329	-	-	363				
HCM Lane V/C Ratio	0.678	0.017	-	-	0.013	-	-	0.033				
HCM Control Delay (s)	37.1	8.4	0	-	7.7	0	-	15.3				
HCM Lane LOS	E	A	A	-	A	A	-	C				
HCM 95th %tile Q(veh)	4.6	0.1	-	-	0	-	-	0.1				

Intersection												
Int Delay, s/veh	2.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	32	156	7	1	393	23	27	13	3	21	2	58
Future Vol, veh/h	32	156	7	1	393	23	27	13	3	21	2	58
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	35	170	8	1	427	25	29	14	3	23	2	63
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	452	0	0	178	0	0	718	698	174	695	690	440
Stage 1	-	-	-	-	-	-	244	244	-	442	442	-
Stage 2	-	-	-	-	-	-	474	454	-	253	248	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1103	-	-	1392	-	-	343	363	867	355	367	615
Stage 1	-	-	-	-	-	-	757	702	-	592	575	-
Stage 2	-	-	-	-	-	-	569	568	-	749	699	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1103	-	-	1392	-	-	298	350	867	333	354	615
Mov Cap-2 Maneuver	-	-	-	-	-	-	298	350	-	333	354	-
Stage 1	-	-	-	-	-	-	731	677	-	571	574	-
Stage 2	-	-	-	-	-	-	508	567	-	705	675	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.4			0			17.8			13.8		
HCM LOS							C			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	328	1103	-	-	1392	-	-	497				
HCM Lane V/C Ratio	0.142	0.032	-	-	0.001	-	-	0.177				
HCM Control Delay (s)	17.8	8.4	0	-	7.6	0	-	13.8				
HCM Lane LOS	C	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.5	0.1	-	-	0	-	-	0.6				

HCM 6th Signalized Intersection Summary

14: 3rd St & South St

12/23/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	202	876	136	48	518	196	82	78	56	240	103	160
Future Volume (veh/h)	202	876	136	48	518	196	82	78	56	240	103	160
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	220	952	0	52	563	0	89	85	0	261	112	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	504	1709		312	1530		158	381		335	906	
Arrive On Green	0.09	0.48	0.00	0.04	0.43	0.00	0.05	0.20	0.00	0.10	0.25	0.00
Sat Flow, veh/h	1781	3647	0	1781	3647	0	3456	1870	1585	3456	3554	1585
Grp Volume(v), veh/h	220	952	0	52	563	0	89	85	0	261	112	0
Grp Sat Flow(s),veh/h/ln	1781	1777	0	1781	1777	0	1728	1870	1585	1728	1777	1585
Q Serve(g_s), s	6.5	19.0	0.0	1.6	10.7	0.0	2.5	3.8	0.0	7.4	2.4	0.0
Cycle Q Clear(g_c), s	6.5	19.0	0.0	1.6	10.7	0.0	2.5	3.8	0.0	7.4	2.4	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	504	1709		312	1530		158	381		335	906	
V/C Ratio(X)	0.44	0.56		0.17	0.37		0.56	0.22		0.78	0.12	
Avail Cap(c_a), veh/h	658	1709		350	1530		211	381		467	906	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.85	0.85	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	13.2	18.4	0.0	15.6	19.3	0.0	46.7	33.2	0.0	44.1	28.7	0.0
Incr Delay (d2), s/veh	0.6	1.3	0.0	0.2	0.6	0.0	3.1	1.4	0.0	5.5	0.3	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	2.4	7.4	0.0	0.6	4.2	0.0	1.1	1.8	0.0	3.4	1.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.8	19.7	0.0	15.8	19.8	0.0	49.8	34.6	0.0	49.6	28.9	0.0
LnGrp LOS	B	B		B	B		D	C		D	C	
Approach Vol, veh/h		1172	A		615	A		174	A		373	A
Approach Delay, s/veh		18.6			19.5			42.4			43.4	
Approach LOS		B			B			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.3	52.6	9.1	30.0	13.4	47.6	14.2	24.9				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	6.0	44.4	6.1	25.5	17.5	32.9	13.5	18.1				
Max Q Clear Time (g_c+I1), s	3.6	21.0	4.5	4.4	8.5	12.7	9.4	5.8				
Green Ext Time (p_c), s	0.0	6.5	0.0	0.5	0.4	3.3	0.3	0.2				

Intersection Summary

HCM 6th Ctrl Delay	24.6
HCM 6th LOS	C

Notes

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

HCM 6th Signalized Intersection Summary

17: 6th St & South St

12/23/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	840	269	12	541	4	168	10	27	15	12	21
Future Volume (veh/h)	14	840	269	12	541	4	168	10	27	15	12	21
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	15	913	0	13	588	4	183	11	29	16	13	23
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	581	1381		523	1370	9	283	321	272	300	104	184
Arrive On Green	1.00	1.00	0.00	0.74	0.74	0.74	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	825	1870	1585	611	1855	13	1372	1870	1585	1367	606	1072
Grp Volume(v), veh/h	15	913	0	13	0	592	183	11	29	16	0	36
Grp Sat Flow(s),veh/h/ln	825	1870	1585	611	0	1868	1372	1870	1585	1367	0	1677
Q Serve(g_s), s	0.3	0.0	0.0	0.6	0.0	12.1	13.0	0.5	1.5	1.0	0.0	1.8
Cycle Q Clear(g_c), s	12.5	0.0	0.0	0.6	0.0	12.1	14.8	0.5	1.5	1.5	0.0	1.8
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	1.00		0.64
Lane Grp Cap(c), veh/h	581	1381		523	0	1379	283	321	272	300	0	288
V/C Ratio(X)	0.03	0.66		0.02	0.00	0.43	0.65	0.03	0.11	0.05	0.00	0.12
Avail Cap(c_a), veh/h	581	1381		523	0	1379	370	440	372	387	0	394
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.72	0.72	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	1.0	0.0	0.0	3.5	0.0	5.0	41.3	34.5	34.9	35.1	0.0	35.0
Incr Delay (d2), s/veh	0.1	1.8	0.0	0.0	0.0	0.2	2.5	0.0	0.2	0.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.7	0.0	0.1	0.0	3.3	4.6	0.2	0.6	0.3	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	1.1	1.8	0.0	3.5	0.0	5.2	43.8	34.5	35.1	35.2	0.0	35.2
LnGrp LOS	A	A		A	A	A	D	C	D	D	A	D
Approach Vol, veh/h	928		A	605			223			52		
Approach Delay, s/veh	1.8			5.2			42.2			35.2		
Approach LOS	A			A			D			D		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	78.3			21.7			78.3			21.7		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	67.5			23.5			67.5			23.5		
Max Q Clear Time (g_c+I1), s	14.5			3.8			14.1			16.8		
Green Ext Time (p_c), s	8.2			0.2			4.1			0.4		

Intersection Summary

HCM 6th Ctrl Delay	8.9
HCM 6th LOS	A

Notes

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

HCM 6th Signalized Intersection Summary

7: 19th St & South St

12/23/2021

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑↑	↵↵	↵
Traffic Volume (veh/h)	1023	131	192	662	370	135
Future Volume (veh/h)	1023	131	192	662	370	135
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1112	0	209	720	402	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2140		406	2541	674	
Arrive On Green	0.60	0.00	0.14	1.00	0.19	0.00
Sat Flow, veh/h	3741	0	1781	3647	3456	1585
Grp Volume(v), veh/h	1112	0	209	720	402	0
Grp Sat Flow(s),veh/h/ln	1777	0	1781	1777	1728	1585
Q Serve(g_s), s	18.1	0.0	4.4	0.0	10.6	0.0
Cycle Q Clear(g_c), s	18.1	0.0	4.4	0.0	10.6	0.0
Prop In Lane		0.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2140		406	2541	674	
V/C Ratio(X)	0.52		0.51	0.28	0.60	
Avail Cap(c_a), veh/h	2140		597	2541	674	
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.91	0.91	1.00	0.00
Uniform Delay (d), s/veh	11.5	0.0	8.1	0.0	36.7	0.0
Incr Delay (d2), s/veh	0.9	0.0	0.9	0.3	3.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.3	0.0	1.2	0.1	4.8	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.4	0.0	9.0	0.3	40.5	0.0
LnGrp LOS	B		A	A	D	
Approach Vol, veh/h	1112	A		929	402	A
Approach Delay, s/veh	12.4			2.2	40.5	
Approach LOS	B			A	D	
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	11.3	64.7		24.0		76.0
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s	17.5	49.5		19.5		71.5
Max Q Clear Time (g_c+l1), s	6.4	20.1		12.6		2.0
Green Ext Time (p_c), s	0.4	8.5		0.9		5.2
Intersection Summary						
HCM 6th Ctrl Delay			13.2			
HCM 6th LOS			B			

Notes

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

HCM 6th Signalized Intersection Summary

8: 17th St & South St

12/23/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	135	995	19	103	754	30	23	33	167	57	31	110
Future Volume (veh/h)	135	995	19	103	754	30	23	33	167	57	31	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	147	1082	21	112	820	33	25	36	182	62	34	120
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	464	2112	41	405	2041	82	250	60	305	194	81	288
Arrive On Green	0.07	0.79	0.79	0.05	0.59	0.59	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	1781	3566	69	1781	3482	140	1233	269	1357	1163	362	1278
Grp Volume(v), veh/h	147	539	564	112	418	435	25	0	218	62	0	154
Grp Sat Flow(s),veh/h/ln	1781	1777	1858	1781	1777	1845	1233	0	1626	1163	0	1640
Q Serve(g_s), s	3.3	10.8	10.8	2.5	12.7	12.7	1.8	0.0	12.0	5.0	0.0	8.0
Cycle Q Clear(g_c), s	3.3	10.8	10.8	2.5	12.7	12.7	9.8	0.0	12.0	17.0	0.0	8.0
Prop In Lane	1.00		0.04	1.00		0.08	1.00		0.83	1.00		0.78
Lane Grp Cap(c), veh/h	464	1052	1100	405	1042	1082	250	0	366	194	0	369
V/C Ratio(X)	0.32	0.51	0.51	0.28	0.40	0.40	0.10	0.00	0.60	0.32	0.00	0.42
Avail Cap(c_a), veh/h	591	1052	1100	524	1042	1082	250	0	366	194	0	369
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.76	0.76	0.76	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.0	5.5	5.5	7.8	11.2	11.2	37.3	0.0	34.7	42.3	0.0	33.1
Incr Delay (d2), s/veh	0.3	1.4	1.3	0.4	1.2	1.1	0.8	0.0	7.0	4.3	0.0	3.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	3.0	3.1	0.8	4.7	4.8	0.6	0.0	5.4	1.7	0.0	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.3	6.8	6.8	8.2	12.3	12.3	38.1	0.0	41.7	46.6	0.0	36.6
LnGrp LOS	A	A	A	A	B	B	D	A	D	D	A	D
Approach Vol, veh/h	1250				965				243		216	
Approach Delay, s/veh	7.0				11.8				41.3		39.5	
Approach LOS	A				B				D		D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.3	63.7		27.0	9.9	63.1		27.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	11.5	52.5		22.5	12.5	51.5		22.5				
Max Q Clear Time (g_c+I1), s	4.5	12.8		19.0	5.3	14.7		14.0				
Green Ext Time (p_c), s	0.1	7.9		0.3	0.2	5.5		0.9				
Intersection Summary												
HCM 6th Ctrl Delay	14.5											
HCM 6th LOS	B											

HCM 6th TWSC
3: 20th St & South St

12/23/2021

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	1084	290	0	1076	1	0	0	77	1	0	7
Future Vol, veh/h	9	1084	290	0	1076	1	0	0	77	1	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Free	-	-	None	-	-	Yield	-	-	None
Storage Length	200	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	1178	315	0	1170	1	0	0	84	1	0	8

Major/Minor	Major1		Major2			Minor1			Minor2			
Conflicting Flow All	1171	0	-	-	-	0	-	-	589	1780	2369	586
Stage 1	-	-	-	-	-	-	-	-	-	1171	1171	-
Stage 2	-	-	-	-	-	-	-	-	-	609	1198	-
Critical Hdwy	4.14	-	-	-	-	-	-	-	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	-	-	-	-	-	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	592	-	0	0	-	-	0	0	452	52	34	454
Stage 1	-	-	0	0	-	-	0	0	-	205	265	-
Stage 2	-	-	0	0	-	-	0	0	-	449	257	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	592	-	-	-	-	-	-	-	452	42	33	454
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	42	33	-
Stage 1	-	-	-	-	-	-	-	-	-	202	265	-
Stage 2	-	-	-	-	-	-	-	-	-	360	253	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	14.8	23.4
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	452	592	-	-	-	204
HCM Lane V/C Ratio	0.185	0.017	-	-	-	0.043
HCM Control Delay (s)	14.8	11.2	-	-	-	23.4
HCM Lane LOS	B	B	-	-	-	C
HCM 95th %tile Q(veh)	0.7	0.1	-	-	-	0.1

HCM 6th TWSC
11: 15th St & South St

12/23/2021

Intersection												
Int Delay, s/veh	15.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↱		↰	↰↱		↰	↰			↰↱	
Traffic Vol, veh/h	23	1174	118	36	740	47	57	1	28	22	0	34
Future Vol, veh/h	23	1174	118	36	740	47	57	1	28	22	0	34
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	-	200	-	-	100	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	25	1276	128	39	804	51	62	1	30	24	0	37

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	855	0	0	1404	0	0	1870	2323	702	1597	2362	428
Stage 1	-	-	-	-	-	-	1390	1390	-	908	908	-
Stage 2	-	-	-	-	-	-	480	933	-	689	1454	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	781	-	-	482	-	-	~ 44	37	381	71	35	575
Stage 1	-	-	-	-	-	-	150	208	-	296	352	-
Stage 2	-	-	-	-	-	-	536	343	-	402	193	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	781	-	-	482	-	-	~ 38	33	381	58	31	575
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 38	33	-	58	31	-
Stage 1	-	-	-	-	-	-	145	201	-	287	323	-
Stage 2	-	-	-	-	-	-	461	315	-	356	187	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.6	\$ 365.1	56.3
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	38	279	781	-	-	482	-	-	128
HCM Lane V/C Ratio	1.63	0.113	0.032	-	-	0.081	-	-	0.476
HCM Control Delay (s)	\$ 541	19.5	9.8	-	-	13.1	-	-	56.3
HCM Lane LOS	F	C	A	-	-	B	-	-	F
HCM 95th %tile Q(veh)	6.5	0.4	0.1	-	-	0.3	-	-	2.2

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

HCM 6th TWSC
20: Hwy W/Salers Ln & South St

12/23/2021

Intersection												
Int Delay, s/veh	3.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	484	168	13	288	3	90	2	12	2	1	5
Future Vol, veh/h	2	484	168	13	288	3	90	2	12	2	1	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	526	183	14	313	3	98	2	13	2	1	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	316	0	0	709	0	0	968	966	618	972	1056	315
Stage 1	-	-	-	-	-	-	622	622	-	343	343	-
Stage 2	-	-	-	-	-	-	346	344	-	629	713	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1244	-	-	890	-	-	233	255	489	232	225	725
Stage 1	-	-	-	-	-	-	474	479	-	672	637	-
Stage 2	-	-	-	-	-	-	670	637	-	470	435	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1244	-	-	890	-	-	226	249	489	221	220	725
Mov Cap-2 Maneuver	-	-	-	-	-	-	226	249	-	221	220	-
Stage 1	-	-	-	-	-	-	473	478	-	670	625	-
Stage 2	-	-	-	-	-	-	651	625	-	454	434	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.4			32.5			14.4		
HCM LOS							D			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	241	1244	-	-	890	-	-	390				
HCM Lane V/C Ratio	0.469	0.002	-	-	0.016	-	-	0.022				
HCM Control Delay (s)	32.5	7.9	0	-	9.1	0	-	14.4				
HCM Lane LOS	D	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	2.3	0	-	-	0	-	-	0.1				

HCM 6th TWSC
23: Hwy JJ & South St

12/23/2021

Intersection												
Int Delay, s/veh	3.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	78	375	22	3	244	19	14	3	4	40	14	60
Future Vol, veh/h	78	375	22	3	244	19	14	3	4	40	14	60
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	85	408	24	3	265	21	15	3	4	43	15	65
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	286	0	0	432	0	0	912	882	420	876	884	276
Stage 1	-	-	-	-	-	-	590	590	-	282	282	-
Stage 2	-	-	-	-	-	-	322	292	-	594	602	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1276	-	-	1128	-	-	255	285	633	269	284	763
Stage 1	-	-	-	-	-	-	494	495	-	725	678	-
Stage 2	-	-	-	-	-	-	690	671	-	491	489	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1276	-	-	1128	-	-	207	259	633	246	258	763
Mov Cap-2 Maneuver	-	-	-	-	-	-	207	259	-	246	258	-
Stage 1	-	-	-	-	-	-	451	451	-	661	676	-
Stage 2	-	-	-	-	-	-	615	669	-	442	446	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.3			0.1			21.1			18.7		
HCM LOS							C			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	246	1276	-	-	1128	-	-	386				
HCM Lane V/C Ratio	0.093	0.066	-	-	0.003	-	-	0.321				
HCM Control Delay (s)	21.1	8	0	-	8.2	0	-	18.7				
HCM Lane LOS	C	A	A	-	A	A	-	C				
HCM 95th %tile Q(veh)	0.3	0.2	-	-	0	-	-	1.4				

HCM 6th Signalized Intersection Summary

14: 3rd St & South St

12/23/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	480	63	19	596	188	71	44	31	157	45	168
Future Volume (veh/h)	180	480	63	19	596	188	71	44	31	157	45	168
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	196	522	0	21	648	0	77	48	0	171	49	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	364	1238		362	1022		201	523		261	1055	
Arrive On Green	0.08	0.35	0.00	0.02	0.29	0.00	0.06	0.28	0.00	0.07	0.29	0.00
Sat Flow, veh/h	1795	3676	0	1795	3676	0	3483	1885	1598	3483	3582	1598
Grp Volume(v), veh/h	196	522	0	21	648	0	77	48	0	171	49	0
Grp Sat Flow(s),veh/h/ln	1795	1791	0	1795	1791	0	1742	1885	1598	1742	1791	1598
Q Serve(g_s), s	4.8	7.2	0.0	0.5	10.2	0.0	1.4	1.2	0.0	3.1	0.6	0.0
Cycle Q Clear(g_c), s	4.8	7.2	0.0	0.5	10.2	0.0	1.4	1.2	0.0	3.1	0.6	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	364	1238		362	1022		201	523		261	1055	
V/C Ratio(X)	0.54	0.42		0.06	0.63		0.38	0.09		0.65	0.05	
Avail Cap(c_a), veh/h	364	1238		457	1022		268	523		268	1055	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	14.9	16.3	0.0	15.7	20.2	0.0	29.4	17.4	0.0	29.2	16.4	0.0
Incr Delay (d2), s/veh	1.6	1.1	0.0	0.1	3.0	0.0	1.2	0.3	0.0	5.4	0.1	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	1.8	2.7	0.0	0.2	4.1	0.0	0.6	0.5	0.0	1.4	0.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.4	17.3	0.0	15.8	23.2	0.0	30.6	17.7	0.0	34.6	16.4	0.0
LnGrp LOS	B	B		B	C		C	B		C	B	
Approach Vol, veh/h		718	A		669	A		125	A		220	A
Approach Delay, s/veh		17.1			23.0			25.7			30.6	
Approach LOS		B			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.1	26.9	8.3	23.6	10.0	23.0	9.4	22.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.0	19.0	5.0	18.0	5.5	18.5	5.0	18.0				
Max Q Clear Time (g_c+I1), s	2.5	9.2	3.4	2.6	6.8	12.2	5.1	3.2				
Green Ext Time (p_c), s	0.0	2.2	0.0	0.1	0.0	2.1	0.0	0.1				

Intersection Summary

HCM 6th Ctrl Delay	21.7
HCM 6th LOS	C

Notes

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

HCM 6th Signalized Intersection Summary

17: 6th St & South St

12/23/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	465	132	10	599	10	173	10	18	11	6	9
Future Volume (veh/h)	18	465	132	10	599	10	173	10	18	11	6	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	20	505	0	11	651	11	188	11	20	12	7	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	546	1408		661	1380	23	290	309	262	292	115	165
Arrive On Green	0.75	0.75	0.00	0.75	0.75	0.75	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	779	1885	1598	901	1848	31	1407	1885	1598	1389	702	1003
Grp Volume(v), veh/h	20	505	0	11	0	662	188	11	20	12	0	17
Grp Sat Flow(s),veh/h/ln	779	1885	1598	901	0	1880	1407	1885	1598	1389	0	1705
Q Serve(g_s), s	1.0	9.4	0.0	0.4	0.0	13.9	13.2	0.5	1.1	0.7	0.0	0.9
Cycle Q Clear(g_c), s	15.0	9.4	0.0	9.8	0.0	13.9	14.0	0.5	1.1	1.2	0.0	0.9
Prop In Lane	1.00		1.00	1.00		0.02	1.00		1.00	1.00		0.59
Lane Grp Cap(c), veh/h	546	1408		661	0	1404	290	309	262	292	0	280
V/C Ratio(X)	0.04	0.36		0.02	0.00	0.47	0.65	0.04	0.08	0.04	0.00	0.06
Avail Cap(c_a), veh/h	546	1408		661	0	1404	553	662	561	552	0	599
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.9	4.4	0.0	6.1	0.0	5.0	41.6	35.5	35.8	36.0	0.0	35.7
Incr Delay (d2), s/veh	0.1	0.7	0.0	0.0	0.0	0.2	2.4	0.0	0.1	0.1	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	2.7	0.0	0.1	0.0	3.7	4.7	0.2	0.4	0.3	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.0	5.1	0.0	6.1	0.0	5.2	44.0	35.6	35.9	36.1	0.0	35.8
LnGrp LOS	A	A		A	A	A	D	D	D	D	A	D
Approach Vol, veh/h	525		A	673			219			29		
Approach Delay, s/veh	5.2			5.3			42.8			35.9		
Approach LOS	A			A			D			D		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	80.0			21.1			80.0			21.1		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	75.5			35.5			75.5			35.5		
Max Q Clear Time (g_c+I1), s	17.0			3.2			15.9			16.0		
Green Ext Time (p_c), s	3.4			0.1			4.8			0.6		
Intersection Summary												
HCM 6th Ctrl Delay	11.6											
HCM 6th LOS	B											

HCM 6th Signalized Intersection Summary

7: 19th St & South St

12/23/2021

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑↑	↵↵	↵
Traffic Volume (veh/h)	556	195	240	630	392	135
Future Volume (veh/h)	556	195	240	630	392	135
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	604	0	261	685	426	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1	1	1	1
Cap, veh/h	1182		506	1903	1089	
Arrive On Green	0.33	0.00	0.12	0.53	0.31	0.00
Sat Flow, veh/h	3770	0	1795	3676	3483	1598
Grp Volume(v), veh/h	604	0	261	685	426	0
Grp Sat Flow(s),veh/h/ln	1791	0	1795	1791	1742	1598
Q Serve(g_s), s	7.8	0.0	5.0	6.4	5.5	0.0
Cycle Q Clear(g_c), s	7.8	0.0	5.0	6.4	5.5	0.0
Prop In Lane		0.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1182		506	1903	1089	
V/C Ratio(X)	0.51		0.52	0.36	0.39	
Avail Cap(c_a), veh/h	1182		581	2052	1089	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	15.6	0.0	10.1	7.8	15.5	0.0
Incr Delay (d2), s/veh	1.6	0.0	0.8	0.1	1.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	0.0	1.5	1.7	2.1	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	17.1	0.0	10.9	7.9	16.6	0.0
LnGrp LOS	B		B	A	B	
Approach Vol, veh/h	604	A		946	426	A
Approach Delay, s/veh	17.1			8.8	16.6	
Approach LOS	B			A	B	
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	11.6	23.5		22.5		35.1
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s	9.5	19.0		18.0		33.0
Max Q Clear Time (g_c+I1), s	7.0	9.8		7.5		8.4
Green Ext Time (p_c), s	0.2	2.5		1.2		4.4
Intersection Summary						
HCM 6th Ctrl Delay			13.0			
HCM 6th LOS			B			

Notes

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

HCM 6th Signalized Intersection Summary

8: 17th St & South St

12/23/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	586	16	180	743	29	21	24	200	29	31	116
Future Volume (veh/h)	89	586	16	180	743	29	21	24	200	29	31	116
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	97	637	17	196	808	32	23	26	217	32	34	126
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	381	1269	34	472	1361	54	418	54	452	343	109	405
Arrive On Green	0.07	0.36	0.36	0.10	0.39	0.39	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	1795	3564	95	1795	3512	139	1236	174	1450	1146	351	1300
Grp Volume(v), veh/h	97	320	334	196	412	428	23	0	243	32	0	160
Grp Sat Flow(s),veh/h/ln	1795	1791	1868	1795	1791	1860	1236	0	1624	1146	0	1651
Q Serve(g_s), s	1.9	8.1	8.1	3.9	10.6	10.6	0.8	0.0	7.0	1.3	0.0	4.3
Cycle Q Clear(g_c), s	1.9	8.1	8.1	3.9	10.6	10.6	5.1	0.0	7.0	8.4	0.0	4.3
Prop In Lane	1.00		0.05	1.00		0.07	1.00		0.89	1.00		0.79
Lane Grp Cap(c), veh/h	381	638	665	472	694	721	418	0	506	343	0	515
V/C Ratio(X)	0.25	0.50	0.50	0.41	0.59	0.59	0.06	0.00	0.48	0.09	0.00	0.31
Avail Cap(c_a), veh/h	441	638	665	587	694	721	418	0	506	343	0	515
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.0	14.7	14.7	10.4	14.1	14.1	17.2	0.0	16.2	19.6	0.0	15.2
Incr Delay (d2), s/veh	0.3	2.8	2.7	0.6	3.7	3.6	0.3	0.0	3.2	0.5	0.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	3.1	3.3	1.2	4.1	4.2	0.2	0.0	2.8	0.4	0.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.3	17.5	17.4	11.0	17.9	17.7	17.4	0.0	19.4	20.1	0.0	16.8
LnGrp LOS	B	B	B	B	B	B	B	A	B	C	A	B
Approach Vol, veh/h	751			1036			266			192		
Approach Delay, s/veh	16.6			16.5			19.2			17.3		
Approach LOS	B			B			B			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.3	25.2		22.6	8.5	27.0		22.6				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	9.5	18.9		18.1	5.9	22.5		18.1				
Max Q Clear Time (g_c+I1), s	5.9	10.1		10.4	3.9	12.6		9.0				
Green Ext Time (p_c), s	0.2	2.4		0.6	0.0	3.4		1.0				
Intersection Summary												
HCM 6th Ctrl Delay				16.9								
HCM 6th LOS				B								

HCM 6th TWSC
3: 20th St & South St

12/23/2021

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	645	335	0	1021	4	0	0	88	1	0	6
Future Vol, veh/h	1	645	335	0	1021	4	0	0	88	1	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Free	-	-	None	-	-	Yield	-	-	None
Storage Length	200	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	1	701	364	0	1110	4	0	0	96	1	0	7

Major/Minor	Major1		Major2		Minor1		Minor2	
Conflicting Flow All	1114	0	-	-	-	0	-	-
Stage 1	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-
Critical Hdwy	4.12	-	-	-	-	-	6.92	7.52
Critical Hdwy Stg 1	-	-	-	-	-	-	-	6.52
Critical Hdwy Stg 2	-	-	-	-	-	-	-	6.52
Follow-up Hdwy	2.21	-	-	-	-	-	3.31	3.51
Pot Cap-1 Maneuver	628	-	0	0	-	-	0	0
Stage 1	-	-	0	0	-	-	0	0
Stage 2	-	-	0	0	-	-	0	0
Platoon blocked, %	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	628	-	-	-	-	-	-	648
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	77
Stage 1	-	-	-	-	-	-	-	224
Stage 2	-	-	-	-	-	-	-	545

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	11.5	18.5
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	648	628	-	-	-	274
HCM Lane V/C Ratio	0.148	0.002	-	-	-	0.028
HCM Control Delay (s)	11.5	10.7	-	-	-	18.5
HCM Lane LOS	B	B	-	-	-	C
HCM 95th %tile Q(veh)	0.5	0	-	-	-	0.1

HCM 6th TWSC
11: 15th St & South St

12/23/2021

Intersection												
Int Delay, s/veh	3.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↱		↰	↰↱		↰	↰			↱↰	
Traffic Vol, veh/h	34	710	60	16	841	46	49	1	26	15	0	31
Future Vol, veh/h	34	710	60	16	841	46	49	1	26	15	0	31
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	-	200	-	-	100	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	37	772	65	17	914	50	53	1	28	16	0	34
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	964	0	0	837	0	0	1370	1877	419	1434	1884	482
Stage 1	-	-	-	-	-	-	879	879	-	973	973	-
Stage 2	-	-	-	-	-	-	491	998	-	461	911	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.52	6.52	6.92	7.52	6.52	6.92
Critical Hdwy Stg 1	-	-	-	-	-	-	6.52	5.52	-	6.52	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.52	5.52	-	6.52	5.52	-
Follow-up Hdwy	2.21	-	-	2.21	-	-	3.51	4.01	3.31	3.51	4.01	3.31
Pot Cap-1 Maneuver	716	-	-	799	-	-	106	72	586	95	71	533
Stage 1	-	-	-	-	-	-	311	366	-	273	331	-
Stage 2	-	-	-	-	-	-	530	322	-	553	353	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	716	-	-	799	-	-	94	67	586	84	66	533
Mov Cap-2 Maneuver	-	-	-	-	-	-	94	67	-	84	66	-
Stage 1	-	-	-	-	-	-	295	347	-	259	324	-
Stage 2	-	-	-	-	-	-	486	315	-	498	335	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.4			0.2			59.3			29.9		
HCM LOS							F			D		
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1			
Capacity (veh/h)	94	455	716	-	-	799	-	-	194			
HCM Lane V/C Ratio	0.567	0.065	0.052	-	-	0.022	-	-	0.258			
HCM Control Delay (s)	84.6	13.5	10.3	-	-	9.6	-	-	29.9			
HCM Lane LOS	F	B	B	-	-	A	-	-	D			
HCM 95th %tile Q(veh)	2.6	0.2	0.2	-	-	0.1	-	-	1			

HCM 6th TWSC
20: Hwy W/Salers Ln & South St

12/23/2021

Intersection												
Int Delay, s/veh	2.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	287	77	5	352	11	91	1	15	2	1	3
Future Vol, veh/h	3	287	77	5	352	11	91	1	15	2	1	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	3	312	84	5	383	12	99	1	16	2	1	3
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	395	0	0	396	0	0	761	765	354	768	801	389
Stage 1	-	-	-	-	-	-	360	360	-	399	399	-
Stage 2	-	-	-	-	-	-	401	405	-	369	402	-
Critical Hdwy	4.11	-	-	4.11	-	-	7.11	6.51	6.21	7.11	6.51	6.21
Critical Hdwy Stg 1	-	-	-	-	-	-	6.11	5.51	-	6.11	5.51	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.11	5.51	-	6.11	5.51	-
Follow-up Hdwy	2.209	-	-	2.209	-	-	3.509	4.009	3.309	3.509	4.009	3.309
Pot Cap-1 Maneuver	1169	-	-	1168	-	-	323	335	692	320	319	661
Stage 1	-	-	-	-	-	-	660	628	-	629	604	-
Stage 2	-	-	-	-	-	-	628	600	-	653	602	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1169	-	-	1168	-	-	318	332	692	310	316	661
Mov Cap-2 Maneuver	-	-	-	-	-	-	318	332	-	310	316	-
Stage 1	-	-	-	-	-	-	658	626	-	627	601	-
Stage 2	-	-	-	-	-	-	621	597	-	635	600	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.1			20.7			13.6		
HCM LOS							C			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	344	1169	-	-	1168	-	-	424				
HCM Lane V/C Ratio	0.338	0.003	-	-	0.005	-	-	0.015				
HCM Control Delay (s)	20.7	8.1	0	-	8.1	0	-	13.6				
HCM Lane LOS	C	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	1.5	0	-	-	0	-	-	0				

Intersection												
Int Delay, s/veh	2.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	41	241	17	1	281	3	17	4	2	9	1	58
Future Vol, veh/h	41	241	17	1	281	3	17	4	2	9	1	58
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	45	262	18	1	305	3	18	4	2	10	1	63

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	308	0	0	280	0	0	702	671	271	673	679	307
Stage 1	-	-	-	-	-	-	361	361	-	309	309	-
Stage 2	-	-	-	-	-	-	341	310	-	364	370	-
Critical Hdwy	4.11	-	-	4.11	-	-	7.11	6.51	6.21	7.11	6.51	6.21
Critical Hdwy Stg 1	-	-	-	-	-	-	6.11	5.51	-	6.11	5.51	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.11	5.51	-	6.11	5.51	-
Follow-up Hdwy	2.209	-	-	2.209	-	-	3.509	4.009	3.309	3.509	4.009	3.309
Pot Cap-1 Maneuver	1258	-	-	1288	-	-	354	379	770	370	375	735
Stage 1	-	-	-	-	-	-	659	628	-	703	661	-
Stage 2	-	-	-	-	-	-	676	661	-	657	622	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1258	-	-	1288	-	-	312	363	770	354	359	735
Mov Cap-2 Maneuver	-	-	-	-	-	-	312	363	-	354	359	-
Stage 1	-	-	-	-	-	-	631	602	-	673	660	-
Stage 2	-	-	-	-	-	-	616	660	-	623	596	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.1			0			16.5			11.4		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	338	1258	-	-	1288	-	-	635
HCM Lane V/C Ratio	0.074	0.035	-	-	0.001	-	-	0.116
HCM Control Delay (s)	16.5	8	0	-	7.8	0	-	11.4
HCM Lane LOS	C	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.2	0.1	-	-	0	-	-	0.4

HCM 6th Signalized Intersection Summary

14: 3rd St & South St

12/23/2021

														
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		
Lane Configurations														
Traffic Volume (veh/h)	84	329	48	24	873	223	152	94	43	121	54	129		
Future Volume (veh/h)	84	329	48	24	873	223	152	94	43	121	54	129		
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Work Zone On Approach	No			No			No			No				
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856		
Adj Flow Rate, veh/h	91	358	0	26	949	0	165	102	0	132	59	0		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3		
Cap, veh/h	354	1904		613	1833		233	366		196	657			
Arrive On Green	0.05	0.54	0.00	0.03	0.52	0.00	0.07	0.20	0.00	0.06	0.19	0.00		
Sat Flow, veh/h	1767	3618	0	1767	3618	0	3428	1856	1572	3428	3526	1572		
Grp Volume(v), veh/h	91	358	0	26	949	0	165	102	0	132	59	0		
Grp Sat Flow(s),veh/h/ln	1767	1763	0	1767	1763	0	1714	1856	1572	1714	1763	1572		
Q Serve(g_s), s	2.4	5.2	0.0	0.7	17.7	0.0	4.7	4.7	0.0	3.8	1.4	0.0		
Cycle Q Clear(g_c), s	2.4	5.2	0.0	0.7	17.7	0.0	4.7	4.7	0.0	3.8	1.4	0.0		
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00		
Lane Grp Cap(c), veh/h	354	1904		613	1833		233	366		196	657			
V/C Ratio(X)	0.26	0.19		0.04	0.52		0.71	0.28		0.67	0.09			
Avail Cap(c_a), veh/h	434	1904		658	1833		339	366		291	657			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	0.00	0.55	0.55	0.00	1.00	1.00	0.00	1.00	1.00	0.00		
Uniform Delay (d), s/veh	11.8	11.8	0.0	10.5	15.8	0.0	45.6	34.1	0.0	46.2	33.7	0.0		
Incr Delay (d2), s/veh	0.4	0.2	0.0	0.0	0.6	0.0	4.0	1.9	0.0	4.0	0.3	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	0.8	1.9	0.0	0.2	6.5	0.0	2.1	2.3	0.0	1.7	0.6	0.0		
Unsig. Movement Delay, s/veh														
LnGrp Delay(d),s/veh	12.2	12.0	0.0	10.5	16.4	0.0	49.6	36.0	0.0	50.2	33.9	0.0		
LnGrp LOS	B	B		B	B		D	D		D	C			
Approach Vol, veh/h	449		A	975		A	267		A	191		A		
Approach Delay, s/veh	12.0			16.2			44.4			45.2				
Approach LOS	B			B			D			D				
Timer - Assigned Phs	1	2	3	4	5	6	7	8						
Phs Duration (G+Y+Rc), s	7.1	58.5	11.3	23.1	9.1	56.5	10.2	24.2						
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5						
Max Green Setting (Gmax), s	5.1	48.7	9.9	18.3	9.1	44.7	8.5	19.7						
Max Q Clear Time (g_c+I1), s	2.7	7.2	6.7	3.4	4.4	19.7	5.8	6.7						
Green Ext Time (p_c), s	0.0	2.3	0.1	0.2	0.1	6.6	0.1	0.3						

Intersection Summary

HCM 6th Ctrl Delay 22.1

HCM 6th LOS C

Notes

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

HCM 6th Signalized Intersection Summary

17: 6th St & South St

12/23/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	357	77	7	786	16	287	17	13	13	7	28
Future Volume (veh/h)	18	357	77	7	786	16	287	17	13	13	7	28
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	20	388	0	8	854	17	312	18	14	14	8	30
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	277	1192		707	1165	23	412	496	420	428	91	343
Arrive On Green	1.00	1.00	0.00	0.64	0.64	0.64	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	631	1856	1572	988	1813	36	1359	1856	1572	1366	342	1283
Grp Volume(v), veh/h	20	388	0	8	0	871	312	18	14	14	0	38
Grp Sat Flow(s),veh/h/ln	631	1856	1572	988	0	1849	1359	1856	1572	1366	0	1625
Q Serve(g_s), s	1.7	0.0	0.0	0.3	0.0	31.8	22.4	0.7	0.7	0.8	0.0	1.8
Cycle Q Clear(g_c), s	33.5	0.0	0.0	0.3	0.0	31.8	24.1	0.7	0.7	1.5	0.0	1.8
Prop In Lane	1.00		1.00	1.00		0.02	1.00		1.00	1.00		0.79
Lane Grp Cap(c), veh/h	277	1192		707	0	1188	412	496	420	428	0	434
V/C Ratio(X)	0.07	0.33		0.01	0.00	0.73	0.76	0.04	0.03	0.03	0.00	0.09
Avail Cap(c_a), veh/h	277	1192		707	0	1188	490	603	511	506	0	528
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.97	0.97	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.3	0.0	0.0	6.4	0.0	12.1	36.5	27.1	27.1	27.6	0.0	27.5
Incr Delay (d2), s/veh	0.5	0.7	0.0	0.0	0.0	2.4	5.6	0.0	0.0	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.2	0.0	0.1	0.0	11.3	7.9	0.3	0.3	0.3	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.8	0.7	0.0	6.4	0.0	14.4	42.1	27.1	27.1	27.7	0.0	27.6
LnGrp LOS	A	A		A	A	B	D	C	C	C	A	C
Approach Vol, veh/h	408		A	879			344			52		
Approach Delay, s/veh	1.1			14.4			40.7			27.6		
Approach LOS	A			B			D			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	68.8			31.2			68.8			31.2		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	58.5			32.5			58.5			32.5		
Max Q Clear Time (g_c+I1), s	35.5			3.8			33.8			26.1		
Green Ext Time (p_c), s	2.3			0.2			6.5			0.6		

Intersection Summary

HCM 6th Ctrl Delay 17.0

HCM 6th LOS B

Notes

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

HCM 6th Signalized Intersection Summary

7: 19th St & South St

12/23/2021

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑	↘	↗
Traffic Volume (veh/h)	488	83	75	1165	117	33
Future Volume (veh/h)	488	83	75	1165	117	33
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	530	0	82	1266	127	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	2133		615	2450	737	
Arrive On Green	0.61	0.00	0.09	1.00	0.22	0.00
Sat Flow, veh/h	3711	0	1767	3618	3428	1572
Grp Volume(v), veh/h	530	0	82	1266	127	0
Grp Sat Flow(s),veh/h/ln	1763	0	1767	1763	1714	1572
Q Serve(g_s), s	7.0	0.0	1.6	0.0	3.0	0.0
Cycle Q Clear(g_c), s	7.0	0.0	1.6	0.0	3.0	0.0
Prop In Lane		0.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2133		615	2450	737	
V/C Ratio(X)	0.25		0.13	0.52	0.17	
Avail Cap(c_a), veh/h	2133		704	2450	737	
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.89	0.89	1.00	0.00
Uniform Delay (d), s/veh	9.2	0.0	5.9	0.0	32.0	0.0
Incr Delay (d2), s/veh	0.3	0.0	0.1	0.7	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	0.5	0.2	1.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	9.5	0.0	6.0	0.7	32.5	0.0
LnGrp LOS	A		A	A	C	
Approach Vol, veh/h	530	A		1348	127	A
Approach Delay, s/veh	9.5			1.0	32.5	
Approach LOS	A			A	C	
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.0	65.0		26.0		74.0
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s	9.5	55.5		21.5		69.5
Max Q Clear Time (g_c+I1), s	3.6	9.0		5.0		2.0
Green Ext Time (p_c), s	0.1	3.6		0.3		12.0
Intersection Summary						
HCM 6th Ctrl Delay			5.2			
HCM 6th LOS			A			

Notes

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

HCM 6th Signalized Intersection Summary 8: 17th St & South St

12/23/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	491	7	40	1123	13	17	4	39	24	9	107
Future Volume (veh/h)	36	491	7	40	1123	13	17	4	39	24	9	107
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	39	534	8	43	1221	14	18	4	42	26	10	116
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	388	2555	38	749	2572	29	116	15	162	187	14	163
Arrive On Green	0.07	1.00	1.00	0.03	0.72	0.72	0.11	0.11	0.11	0.11	0.11	0.11
Sat Flow, veh/h	1767	3555	53	1767	3570	41	1255	139	1455	1349	126	1465
Grp Volume(v), veh/h	39	265	277	43	603	632	18	0	46	26	0	126
Grp Sat Flow(s),veh/h/ln	1767	1763	1846	1767	1763	1848	1255	0	1594	1349	0	1592
Q Serve(g_s), s	0.6	0.0	0.0	0.6	14.5	14.5	1.4	0.0	2.6	1.8	0.0	7.6
Cycle Q Clear(g_c), s	0.6	0.0	0.0	0.6	14.5	14.5	9.0	0.0	2.6	4.4	0.0	7.6
Prop In Lane	1.00		0.03	1.00		0.02	1.00		0.91	1.00		0.92
Lane Grp Cap(c), veh/h	388	1267	1327	749	1270	1331	116	0	178	187	0	178
V/C Ratio(X)	0.10	0.21	0.21	0.06	0.47	0.47	0.16	0.00	0.26	0.14	0.00	0.71
Avail Cap(c_a), veh/h	444	1267	1327	803	1270	1331	246	0	343	326	0	342
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.97	0.97	0.97	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	4.1	0.0	0.0	3.1	5.9	5.9	47.2	0.0	40.6	42.7	0.0	42.9
Incr Delay (d2), s/veh	0.1	0.4	0.3	0.0	1.3	1.2	0.6	0.0	0.8	0.3	0.0	5.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.1	0.1	0.1	4.3	4.5	0.5	0.0	1.1	0.6	0.0	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.2	0.4	0.3	3.1	7.2	7.2	47.8	0.0	41.4	43.0	0.0	48.0
LnGrp LOS	A	A	A	A	A	A	D	A	D	D	A	D
Approach Vol, veh/h	581				1278				64			
Approach Delay, s/veh	0.6				7.0				43.2			
Approach LOS	A				A				D			
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.0	76.4		15.7	7.8	76.5		15.7				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	6.5	58.5		21.5	6.5	58.5		21.5				
Max Q Clear Time (g_c+I1), s	2.6	2.0		9.6	2.6	16.5		11.0				
Green Ext Time (p_c), s	0.0	3.1		0.5	0.0	9.6		0.1				
Intersection Summary												
HCM 6th Ctrl Delay	9.3											
HCM 6th LOS	A											

HCM 6th TWSC
3: 20th St & South St

12/23/2021

Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	548	95	0	1279	1	0	0	16	1	0	10
Future Vol, veh/h	3	548	95	0	1279	1	0	0	16	1	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Free	-	-	None	-	-	Yield	-	-	None
Storage Length	200	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	3	596	103	0	1390	1	0	0	17	1	0	11

Major/Minor	Major1		Major2		Minor1		Minor2	
Conflicting Flow All	1391	0	-	-	-	0	-	-
Stage 1	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-
Critical Hdwy	4.16	-	-	-	-	-	6.96	7.56
Critical Hdwy Stg 1	-	-	-	-	-	-	-	6.56
Critical Hdwy Stg 2	-	-	-	-	-	-	-	6.56
Follow-up Hdwy	2.23	-	-	-	-	-	3.33	3.53
Pot Cap-1 Maneuver	483	-	0	0	-	-	0	695
Stage 1	-	-	0	0	-	-	0	148
Stage 2	-	-	0	0	-	-	0	678
Platoon blocked, %	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	483	-	-	-	-	-	-	695
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	58
Stage 1	-	-	-	-	-	-	-	147
Stage 2	-	-	-	-	-	-	-	657

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	10.3	19.9
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	695	483	-	-	-	253
HCM Lane V/C Ratio	0.025	0.007	-	-	-	0.047
HCM Control Delay (s)	10.3	12.5	-	-	-	19.9
HCM Lane LOS	B	B	-	-	-	C
HCM 95th %tile Q(veh)	0.1	0	-	-	-	0.1

HCM 6th TWSC
11: 15th St & South St

12/23/2021

Intersection												
Int Delay, s/veh	2.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	543	19	21	1112	12	67	0	23	0	0	2
Future Vol, veh/h	1	543	19	21	1112	12	67	0	23	0	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	-	200	-	-	100	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	1	590	21	23	1209	13	73	0	25	0	0	2
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1222	0	0	611	0	0	1254	1871	306	1559	1875	611
Stage 1	-	-	-	-	-	-	603	603	-	1262	1262	-
Stage 2	-	-	-	-	-	-	651	1268	-	297	613	-
Critical Hdwy	4.16	-	-	4.16	-	-	7.56	6.56	6.96	7.56	6.56	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-	6.56	5.56	-	6.56	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.56	5.56	-	6.56	5.56	-
Follow-up Hdwy	2.23	-	-	2.23	-	-	3.53	4.03	3.33	3.53	4.03	3.33
Pot Cap-1 Maneuver	561	-	-	957	-	-	127	71	687	75	70	434
Stage 1	-	-	-	-	-	-	450	484	-	178	238	-
Stage 2	-	-	-	-	-	-	421	236	-	684	479	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	561	-	-	957	-	-	124	69	687	71	68	434
Mov Cap-2 Maneuver	-	-	-	-	-	-	124	69	-	71	68	-
Stage 1	-	-	-	-	-	-	449	483	-	178	232	-
Stage 2	-	-	-	-	-	-	409	230	-	658	478	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.2			53.9			13.3		
HCM LOS							F			B		
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1			
Capacity (veh/h)	124	687	561	-	-	957	-	-	434			
HCM Lane V/C Ratio	0.587	0.036	0.002	-	-	0.024	-	-	0.005			
HCM Control Delay (s)	68.8	10.4	11.4	-	-	8.9	-	-	13.3			
HCM Lane LOS	F	B	B	-	-	A	-	-	B			
HCM 95th %tile Q(veh)	2.9	0.1	0	-	-	0.1	-	-	0			

Intersection												
Int Delay, s/veh	9.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	180	40	16	463	4	158	27	18	4	2	5
Future Vol, veh/h	17	180	40	16	463	4	158	27	18	4	2	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	18	196	43	17	503	4	172	29	20	4	2	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	507	0	0	239	0	0	797	795	218	817	814	505
Stage 1	-	-	-	-	-	-	254	254	-	539	539	-
Stage 2	-	-	-	-	-	-	543	541	-	278	275	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1053	-	-	1322	-	-	303	319	819	294	311	565
Stage 1	-	-	-	-	-	-	748	695	-	525	520	-
Stage 2	-	-	-	-	-	-	522	519	-	726	681	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1053	-	-	1322	-	-	290	307	819	258	299	565
Mov Cap-2 Maneuver	-	-	-	-	-	-	290	307	-	258	299	-
Stage 1	-	-	-	-	-	-	733	681	-	515	511	-
Stage 2	-	-	-	-	-	-	506	510	-	665	667	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.6			0.3			40.8			15.5		
HCM LOS							E			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	310	1053	-	-	1322	-	-	354				
HCM Lane V/C Ratio	0.712	0.018	-	-	0.013	-	-	0.034				
HCM Control Delay (s)	40.8	8.5	0	-	7.8	0	-	15.5				
HCM Lane LOS	E	A	A	-	A	A	-	C				
HCM 95th %tile Q(veh)	5.1	0.1	-	-	0	-	-	0.1				

Intersection												
Int Delay, s/veh	3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	33	159	7	1	401	23	28	13	3	21	2	59
Future Vol, veh/h	33	159	7	1	401	23	28	13	3	21	2	59
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	36	173	8	1	436	25	30	14	3	23	2	64
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	461	0	0	181	0	0	733	712	177	709	704	449
Stage 1	-	-	-	-	-	-	249	249	-	451	451	-
Stage 2	-	-	-	-	-	-	484	463	-	258	253	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1095	-	-	1388	-	-	335	356	863	348	360	608
Stage 1	-	-	-	-	-	-	753	699	-	586	569	-
Stage 2	-	-	-	-	-	-	562	562	-	744	696	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1095	-	-	1388	-	-	289	342	863	326	346	608
Mov Cap-2 Maneuver	-	-	-	-	-	-	289	342	-	326	346	-
Stage 1	-	-	-	-	-	-	725	673	-	564	568	-
Stage 2	-	-	-	-	-	-	500	561	-	699	670	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.4			0			18.3			14		
HCM LOS							C			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	318	1095	-	-	1388	-	-	490				
HCM Lane V/C Ratio	0.15	0.033	-	-	0.001	-	-	0.182				
HCM Control Delay (s)	18.3	8.4	0	-	7.6	0	-	14				
HCM Lane LOS	C	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.5	0.1	-	-	0	-	-	0.7				

HCM 6th Signalized Intersection Summary

14: 3rd St & South St

12/23/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	206	894	139	49	528	200	84	80	57	245	105	163
Future Volume (veh/h)	206	894	139	49	528	200	84	80	57	245	105	163
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	224	972	0	53	574	0	91	87	0	266	114	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	505	1729		310	1549		159	368		340	885	
Arrive On Green	0.09	0.49	0.00	0.04	0.44	0.00	0.05	0.20	0.00	0.10	0.25	0.00
Sat Flow, veh/h	1781	3647	0	1781	3647	0	3456	1870	1585	3456	3554	1585
Grp Volume(v), veh/h	224	972	0	53	574	0	91	87	0	266	114	0
Grp Sat Flow(s),veh/h/ln	1781	1777	0	1781	1777	0	1728	1870	1585	1728	1777	1585
Q Serve(g_s), s	6.5	19.3	0.0	1.6	10.9	0.0	2.6	3.9	0.0	7.5	2.5	0.0
Cycle Q Clear(g_c), s	6.5	19.3	0.0	1.6	10.9	0.0	2.6	3.9	0.0	7.5	2.5	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	505	1729		310	1549		159	368		340	885	
V/C Ratio(X)	0.44	0.56		0.17	0.37		0.57	0.24		0.78	0.13	
Avail Cap(c_a), veh/h	662	1729		350	1549		232	368		467	885	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.84	0.84	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	13.0	18.2	0.0	15.4	19.0	0.0	46.7	33.9	0.0	44.0	29.1	0.0
Incr Delay (d2), s/veh	0.6	1.3	0.0	0.2	0.6	0.0	3.2	1.5	0.0	5.8	0.3	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	2.4	7.5	0.0	0.6	4.3	0.0	1.2	1.9	0.0	3.4	1.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.6	19.5	0.0	15.6	19.6	0.0	50.0	35.4	0.0	49.9	29.4	0.0
LnGrp LOS	B	B		B	B		D	D		D	C	
Approach Vol, veh/h		1196	A		627	A		178	A		380	A
Approach Delay, s/veh		18.4			19.2			42.8			43.7	
Approach LOS		B			B			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.4	53.1	9.1	29.4	13.4	48.1	14.3	24.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	6.1	44.3	6.7	24.9	17.7	32.7	13.5	18.1				
Max Q Clear Time (g_c+I1), s	3.6	21.3	4.6	4.5	8.5	12.9	9.5	5.9				
Green Ext Time (p_c), s	0.0	6.6	0.0	0.5	0.4	3.4	0.3	0.2				
Intersection Summary												
HCM 6th Ctrl Delay			24.5									
HCM 6th LOS			C									
Notes												
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary

17: 6th St & South St

12/23/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	857	274	12	552	4	171	10	28	15	12	21
Future Volume (veh/h)	14	857	274	12	552	4	171	10	28	15	12	21
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	15	932	0	13	600	4	186	11	30	16	13	23
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	569	1377		514	1366	9	286	325	276	303	105	186
Arrive On Green	1.00	1.00	0.00	0.74	0.74	0.74	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	816	1870	1585	601	1856	12	1372	1870	1585	1366	606	1072
Grp Volume(v), veh/h	15	932	0	13	0	604	186	11	30	16	0	36
Grp Sat Flow(s),veh/h/ln	816	1870	1585	601	0	1868	1372	1870	1585	1366	0	1677
Q Serve(g_s), s	0.3	0.0	0.0	0.6	0.0	12.6	13.2	0.5	1.6	1.0	0.0	1.8
Cycle Q Clear(g_c), s	12.9	0.0	0.0	0.6	0.0	12.6	15.0	0.5	1.6	1.5	0.0	1.8
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	1.00		0.64
Lane Grp Cap(c), veh/h	569	1377		514	0	1375	286	325	276	303	0	292
V/C Ratio(X)	0.03	0.68		0.03	0.00	0.44	0.65	0.03	0.11	0.05	0.00	0.12
Avail Cap(c_a), veh/h	569	1377		514	0	1375	371	441	374	388	0	396
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.70	0.70	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	1.1	0.0	0.0	3.6	0.0	5.2	41.2	34.3	34.8	34.9	0.0	34.9
Incr Delay (d2), s/veh	0.1	1.9	0.0	0.0	0.0	0.2	2.5	0.0	0.2	0.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.7	0.0	0.1	0.0	3.5	4.6	0.2	0.6	0.3	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	1.2	1.9	0.0	3.6	0.0	5.4	43.7	34.4	34.9	35.0	0.0	35.0
LnGrp LOS	A	A		A	A	A	D	C	C	C	A	D
Approach Vol, veh/h	947		A	617			227			52		
Approach Delay, s/veh	1.9			5.3			42.1			35.0		
Approach LOS	A			A			D			D		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	78.1			21.9			78.1			21.9		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	67.4			23.6			67.4			23.6		
Max Q Clear Time (g_c+I1), s	14.9			3.8			14.6			17.0		
Green Ext Time (p_c), s	8.5			0.2			4.2			0.4		
Intersection Summary												
HCM 6th Ctrl Delay	8.9											
HCM 6th LOS	A											

HCM 6th Signalized Intersection Summary

7: 19th St & South St

12/23/2021

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑↑	↵↵	↵
Traffic Volume (veh/h)	1044	134	196	675	377	138
Future Volume (veh/h)	1044	134	196	675	377	138
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1135	0	213	734	410	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2152		403	2555	660	
Arrive On Green	0.61	0.00	0.14	1.00	0.19	0.00
Sat Flow, veh/h	3741	0	1781	3647	3456	1585
Grp Volume(v), veh/h	1135	0	213	734	410	0
Grp Sat Flow(s),veh/h/ln	1777	0	1781	1777	1728	1585
Q Serve(g_s), s	18.5	0.0	4.5	0.0	10.9	0.0
Cycle Q Clear(g_c), s	18.5	0.0	4.5	0.0	10.9	0.0
Prop In Lane		0.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2152		403	2555	660	
V/C Ratio(X)	0.53		0.53	0.29	0.62	
Avail Cap(c_a), veh/h	2152		597	2555	660	
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.90	0.90	1.00	0.00
Uniform Delay (d), s/veh	11.4	0.0	8.2	0.0	37.1	0.0
Incr Delay (d2), s/veh	0.9	0.0	1.0	0.3	4.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.5	0.0	1.2	0.1	4.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.4	0.0	9.2	0.3	41.5	0.0
LnGrp LOS	B		A	A	D	
Approach Vol, veh/h	1135	A		947	410	A
Approach Delay, s/veh	12.4			2.3	41.5	
Approach LOS	B			A	D	
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	11.4	65.0		23.6		76.4
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s	17.8	49.6		19.1		71.9
Max Q Clear Time (g_c+I1), s	6.5	20.5		12.9		2.0
Green Ext Time (p_c), s	0.4	8.8		0.8		5.3
Intersection Summary						
HCM 6th Ctrl Delay			13.3			
HCM 6th LOS			B			

Notes

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

HCM 6th Signalized Intersection Summary

8: 17th St & South St

12/23/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	138	1015	19	105	769	31	23	34	170	58	32	112
Future Volume (veh/h)	138	1015	19	105	769	31	23	34	170	58	32	112
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	150	1103	21	114	836	34	25	37	185	63	35	122
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	458	2112	40	398	2037	83	248	61	305	191	82	287
Arrive On Green	0.07	0.79	0.79	0.05	0.59	0.59	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	1781	3567	68	1781	3480	142	1230	271	1355	1159	366	1275
Grp Volume(v), veh/h	150	549	575	114	427	443	25	0	222	63	0	157
Grp Sat Flow(s),veh/h/ln	1781	1777	1858	1781	1777	1845	1230	0	1626	1159	0	1641
Q Serve(g_s), s	3.3	11.2	11.2	2.5	13.1	13.1	1.8	0.0	12.3	5.2	0.0	8.2
Cycle Q Clear(g_c), s	3.3	11.2	11.2	2.5	13.1	13.1	10.0	0.0	12.3	17.4	0.0	8.2
Prop In Lane	1.00		0.04	1.00		0.08	1.00		0.83	1.00		0.78
Lane Grp Cap(c), veh/h	458	1052	1100	398	1040	1080	248	0	366	191	0	369
V/C Ratio(X)	0.33	0.52	0.52	0.29	0.41	0.41	0.10	0.00	0.61	0.33	0.00	0.43
Avail Cap(c_a), veh/h	584	1052	1100	518	1040	1080	248	0	366	191	0	369
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.74	0.74	0.74	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.0	5.5	5.5	7.9	11.3	11.3	37.5	0.0	34.8	42.6	0.0	33.2
Incr Delay (d2), s/veh	0.3	1.4	1.3	0.4	1.2	1.2	0.8	0.0	7.3	4.6	0.0	3.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	3.0	3.2	0.8	4.8	5.0	0.6	0.0	5.5	1.7	0.0	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.3	6.9	6.8	8.3	12.5	12.5	38.3	0.0	42.1	47.2	0.0	36.8
LnGrp LOS	A	A	A	A	B	B	D	A	D	D	A	D
Approach Vol, veh/h	1274				984				247		220	
Approach Delay, s/veh	7.0				12.0				41.7		39.7	
Approach LOS	A				B				D		D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.3	63.7		27.0	10.0	63.0		27.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	11.5	52.5		22.5	12.5	51.5		22.5				
Max Q Clear Time (g_c+I1), s	4.5	13.2		19.4	5.3	15.1		14.3				
Green Ext Time (p_c), s	0.1	8.1		0.3	0.2	5.6		0.9				
Intersection Summary												
HCM 6th Ctrl Delay	14.6											
HCM 6th LOS	B											

HCM 6th TWSC
3: 20th St & South St

12/23/2021

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	1106	296	0	1098	1	0	0	79	1	0	7
Future Vol, veh/h	9	1106	296	0	1098	1	0	0	79	1	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Free	-	-	None	-	-	Yield	-	-	None
Storage Length	200	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	1202	322	0	1193	1	0	0	86	1	0	8

Major/Minor	Major1		Major2		Minor1		Minor2	
Conflicting Flow All	1194	0	-	-	-	0	-	-
Stage 1	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-
Critical Hdwy	4.14	-	-	-	-	-	6.94	7.54
Critical Hdwy Stg 1	-	-	-	-	-	-	-	6.54
Critical Hdwy Stg 2	-	-	-	-	-	-	-	6.54
Follow-up Hdwy	2.22	-	-	-	-	-	3.32	3.52
Pot Cap-1 Maneuver	580	-	0	0	-	-	0	443
Stage 1	-	-	0	0	-	-	0	198
Stage 2	-	-	0	0	-	-	0	442
Platoon blocked, %	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	580	-	-	-	-	-	-	443
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	39
Stage 1	-	-	-	-	-	-	-	195
Stage 2	-	-	-	-	-	-	-	350

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	15.1	24.4
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	443	580	-	-	-	194
HCM Lane V/C Ratio	0.194	0.017	-	-	-	0.045
HCM Control Delay (s)	15.1	11.3	-	-	-	24.4
HCM Lane LOS	C	B	-	-	-	C
HCM 95th %tile Q(veh)	0.7	0.1	-	-	-	0.1

HCM 6th TWSC
11: 15th St & South St

12/23/2021

Intersection												
Int Delay, s/veh	17											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↱		↰	↰↱		↰	↱			↰↱	
Traffic Vol, veh/h	23	1198	120	34	755	48	58	1	29	22	0	35
Future Vol, veh/h	23	1198	120	34	755	48	58	1	29	22	0	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	-	200	-	-	100	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	25	1302	130	37	821	52	63	1	32	24	0	38

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	873	0	0	1432	0	0	1902	2364	716	1623	2403	437
Stage 1	-	-	-	-	-	-	1417	1417	-	921	921	-
Stage 2	-	-	-	-	-	-	485	947	-	702	1482	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	768	-	-	470	-	-	~ 42	35	373	68	33	567
Stage 1	-	-	-	-	-	-	144	201	-	291	347	-
Stage 2	-	-	-	-	-	-	532	338	-	395	187	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	768	-	-	470	-	-	~ 36	31	373	56	29	567
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 36	31	-	56	29	-
Stage 1	-	-	-	-	-	-	139	194	-	281	320	-
Stage 2	-	-	-	-	-	-	457	311	-	348	181	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.5	\$ 403.4	59.3
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	36	273	768	-	-	470	-	-	125
HCM Lane V/C Ratio	1.751	0.119	0.033	-	-	0.079	-	-	0.496
HCM Control Delay (s)	\$ 601.7	20	9.8	-	-	13.3	-	-	59.3
HCM Lane LOS	F	C	A	-	-	B	-	-	F
HCM 95th %tile Q(veh)	6.8	0.4	0.1	-	-	0.3	-	-	2.3

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

HCM 6th TWSC
20: Hwy W/Salers Ln & South St

12/23/2021

Intersection												
Int Delay, s/veh	3.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	494	171	13	294	3	92	2	12	2	1	5
Future Vol, veh/h	2	494	171	13	294	3	92	2	12	2	1	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	537	186	14	320	3	100	2	13	2	1	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	323	0	0	723	0	0	987	985	630	992	1077	322
Stage 1	-	-	-	-	-	-	634	634	-	350	350	-
Stage 2	-	-	-	-	-	-	353	351	-	642	727	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1237	-	-	879	-	-	226	248	482	225	219	719
Stage 1	-	-	-	-	-	-	467	473	-	666	633	-
Stage 2	-	-	-	-	-	-	664	632	-	463	429	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1237	-	-	879	-	-	220	243	482	214	214	719
Mov Cap-2 Maneuver	-	-	-	-	-	-	220	243	-	214	214	-
Stage 1	-	-	-	-	-	-	466	472	-	664	621	-
Stage 2	-	-	-	-	-	-	645	620	-	447	428	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.4			34.2			14.7		
HCM LOS							D			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	235	1237	-	-	879	-	-	381				
HCM Lane V/C Ratio	0.49	0.002	-	-	0.016	-	-	0.023				
HCM Control Delay (s)	34.2	7.9	0	-	9.2	0	-	14.7				
HCM Lane LOS	D	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	2.5	0	-	-	0	-	-	0.1				

HCM 6th TWSC
23: Hwy JJ & South St

12/23/2021

Intersection												
Int Delay, s/veh	3.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	80	383	22	3	249	19	14	3	4	41	14	61
Future Vol, veh/h	80	383	22	3	249	19	14	3	4	41	14	61
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	87	416	24	3	271	21	15	3	4	45	15	66
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	292	0	0	440	0	0	930	900	428	894	902	282
Stage 1	-	-	-	-	-	-	602	602	-	288	288	-
Stage 2	-	-	-	-	-	-	328	298	-	606	614	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1270	-	-	1120	-	-	248	278	627	262	277	757
Stage 1	-	-	-	-	-	-	486	489	-	720	674	-
Stage 2	-	-	-	-	-	-	685	667	-	484	483	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1270	-	-	1120	-	-	200	252	627	239	251	757
Mov Cap-2 Maneuver	-	-	-	-	-	-	200	252	-	239	251	-
Stage 1	-	-	-	-	-	-	442	445	-	654	672	-
Stage 2	-	-	-	-	-	-	609	665	-	434	439	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.3			0.1			21.7			19.3		
HCM LOS							C			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	238	1270	-	-	1120	-	-	377				
HCM Lane V/C Ratio	0.096	0.068	-	-	0.003	-	-	0.334				
HCM Control Delay (s)	21.7	8	0	-	8.2	0	-	19.3				
HCM Lane LOS	C	A	A	-	A	A	-	C				
HCM 95th %tile Q(veh)	0.3	0.2	-	-	0	-	-	1.4				

HCM 6th Signalized Intersection Summary

14: 3rd St & South St

12/23/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	184	490	64	19	608	192	72	45	32	160	46	171
Future Volume (veh/h)	184	490	64	19	608	192	72	45	32	160	46	171
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	200	533	0	21	661	0	78	49	0	174	50	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	396	1357		385	1091		196	492		261	1002	
Arrive On Green	0.10	0.38	0.00	0.02	0.30	0.00	0.06	0.26	0.00	0.07	0.28	0.00
Sat Flow, veh/h	1795	3676	0	1795	3676	0	3483	1885	1598	3483	3582	1598
Grp Volume(v), veh/h	200	533	0	21	661	0	78	49	0	174	50	0
Grp Sat Flow(s),veh/h/ln	1795	1791	0	1795	1791	0	1742	1885	1598	1742	1791	1598
Q Serve(g_s), s	4.9	7.5	0.0	0.5	10.9	0.0	1.5	1.4	0.0	3.4	0.7	0.0
Cycle Q Clear(g_c), s	4.9	7.5	0.0	0.5	10.9	0.0	1.5	1.4	0.0	3.4	0.7	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	396	1357		385	1091		196	492		261	1002	
V/C Ratio(X)	0.51	0.39		0.05	0.61		0.40	0.10		0.67	0.05	
Avail Cap(c_a), veh/h	414	1357		472	1091		253	492		278	1002	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	14.1	15.6	0.0	15.8	20.5	0.0	31.4	19.3	0.0	31.1	18.1	0.0
Incr Delay (d2), s/veh	1.0	0.9	0.0	0.1	2.5	0.0	1.3	0.4	0.0	5.5	0.1	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	1.7	2.8	0.0	0.2	4.3	0.0	0.6	0.6	0.0	1.5	0.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.1	16.5	0.0	15.8	23.0	0.0	32.7	19.7	0.0	36.6	18.2	0.0
LnGrp LOS	B	B		B	C		C	B		D	B	
Approach Vol, veh/h	733		A	682		A	127		A	224		A
Approach Delay, s/veh	16.1			22.7			27.7			32.5		
Approach LOS	B			C			C			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.2	30.6	8.4	23.8	11.3	25.5	9.7	22.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.0	23.5	5.0	18.5	7.5	21.0	5.5	18.0				
Max Q Clear Time (g_c+I1), s	2.5	9.5	3.5	2.7	6.9	12.9	5.4	3.4				
Green Ext Time (p_c), s	0.0	2.7	0.0	0.1	0.0	2.5	0.0	0.1				
Intersection Summary												
HCM 6th Ctrl Delay	21.6											
HCM 6th LOS	C											

HCM 6th Signalized Intersection Summary

17: 6th St & South St

12/23/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	474	135	10	611	10	176	10	17	11	6	9
Future Volume (veh/h)	18	474	135	10	611	10	176	10	17	11	6	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	20	515	0	11	664	11	191	11	18	12	7	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	539	1420		655	1393	23	286	310	263	288	116	165
Arrive On Green	0.75	0.75	0.00	0.75	0.75	0.75	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	770	1885	1598	893	1849	31	1407	1885	1598	1392	702	1003
Grp Volume(v), veh/h	20	515	0	11	0	675	191	11	18	12	0	17
Grp Sat Flow(s),veh/h/ln	770	1885	1598	893	0	1880	1407	1885	1598	1392	0	1705
Q Serve(g_s), s	1.1	10.2	0.0	0.5	0.0	15.1	14.5	0.5	1.0	0.8	0.0	0.9
Cycle Q Clear(g_c), s	16.3	10.2	0.0	10.6	0.0	15.1	15.4	0.5	1.0	1.3	0.0	0.9
Prop In Lane	1.00		1.00	1.00		0.02	1.00		1.00	1.00		0.59
Lane Grp Cap(c), veh/h	539	1420		655	0	1416	286	310	263	288	0	281
V/C Ratio(X)	0.04	0.36		0.02	0.00	0.48	0.67	0.04	0.07	0.04	0.00	0.06
Avail Cap(c_a), veh/h	539	1420		655	0	1416	548	663	562	548	0	599
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.3	4.6	0.0	6.4	0.0	5.2	45.1	38.4	38.7	39.0	0.0	38.6
Incr Delay (d2), s/veh	0.1	0.7	0.0	0.0	0.0	0.3	2.7	0.0	0.1	0.1	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	3.1	0.0	0.1	0.0	4.3	5.2	0.3	0.4	0.3	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.5	5.3	0.0	6.4	0.0	5.5	47.8	38.5	38.8	39.1	0.0	38.7
LnGrp LOS	A	A		A	A	A	D	D	D	D	A	D
Approach Vol, veh/h	535		A	686			220			29		
Approach Delay, s/veh	5.4			5.5			46.6			38.8		
Approach LOS	A			A			D			D		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	87.0			22.5			87.0			22.5		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	82.5			38.5			82.5			38.5		
Max Q Clear Time (g_c+l1), s	18.3			3.3			17.1			17.4		
Green Ext Time (p_c), s	3.4			0.1			4.9			0.6		
Intersection Summary												
HCM 6th Ctrl Delay	12.3											
HCM 6th LOS	B											

HCM 6th Signalized Intersection Summary

7: 19th St & South St

12/23/2021

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↖	↑↑	↖↗	↗
Traffic Volume (veh/h)	567	199	245	643	400	138
Future Volume (veh/h)	567	199	245	643	400	138
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	616	0	266	699	435	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1	1	1	1
Cap, veh/h	1179		503	1906	1086	
Arrive On Green	0.33	0.00	0.12	0.53	0.31	0.00
Sat Flow, veh/h	3770	0	1795	3676	3483	1598
Grp Volume(v), veh/h	616	0	266	699	435	0
Grp Sat Flow(s),veh/h/ln	1791	0	1795	1791	1742	1598
Q Serve(g_s), s	8.0	0.0	5.1	6.5	5.7	0.0
Cycle Q Clear(g_c), s	8.0	0.0	5.1	6.5	5.7	0.0
Prop In Lane		0.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1179		503	1906	1086	
V/C Ratio(X)	0.52		0.53	0.37	0.40	
Avail Cap(c_a), veh/h	1179		575	2048	1086	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	15.7	0.0	10.1	7.8	15.6	0.0
Incr Delay (d2), s/veh	1.7	0.0	0.9	0.1	1.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	0.0	1.6	1.7	2.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	17.3	0.0	11.0	8.0	16.7	0.0
LnGrp LOS	B		B	A	B	
Approach Vol, veh/h	616	A		965	435	A
Approach Delay, s/veh	17.3			8.8	16.7	
Approach LOS	B			A	B	
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	11.7	23.5		22.5		35.2
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s	9.5	19.0		18.0		33.0
Max Q Clear Time (g_c+I1), s	7.1	10.0		7.7		8.5
Green Ext Time (p_c), s	0.2	2.5		1.2		4.5
Intersection Summary						
HCM 6th Ctrl Delay			13.1			
HCM 6th LOS			B			

Notes

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

HCM 6th Signalized Intersection Summary

8: 17th St & South St

12/23/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	91	598	16	184	758	30	21	24	204	30	32	118
Future Volume (veh/h)	91	598	16	184	758	30	21	24	204	30	32	118
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	99	650	17	200	824	33	23	26	222	33	35	128
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	377	1264	33	469	1360	54	415	53	453	338	111	404
Arrive On Green	0.07	0.35	0.35	0.10	0.39	0.39	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	1795	3566	93	1795	3510	141	1233	170	1453	1141	355	1297
Grp Volume(v), veh/h	99	326	341	200	420	437	23	0	248	33	0	163
Grp Sat Flow(s),veh/h/ln	1795	1791	1868	1795	1791	1860	1233	0	1624	1141	0	1652
Q Serve(g_s), s	2.0	8.4	8.4	4.0	10.9	10.9	0.8	0.0	7.2	1.4	0.0	4.4
Cycle Q Clear(g_c), s	2.0	8.4	8.4	4.0	10.9	10.9	5.2	0.0	7.2	8.6	0.0	4.4
Prop In Lane	1.00		0.05	1.00		0.08	1.00		0.90	1.00		0.79
Lane Grp Cap(c), veh/h	377	635	662	469	694	720	415	0	506	338	0	515
V/C Ratio(X)	0.26	0.51	0.51	0.43	0.61	0.61	0.06	0.00	0.49	0.10	0.00	0.32
Avail Cap(c_a), veh/h	436	635	662	587	694	720	415	0	506	338	0	515
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.1	14.8	14.8	10.5	14.2	14.2	17.3	0.0	16.2	19.7	0.0	15.3
Incr Delay (d2), s/veh	0.4	3.0	2.8	0.6	3.9	3.8	0.3	0.0	3.4	0.6	0.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	3.3	3.4	1.2	4.2	4.4	0.3	0.0	2.9	0.4	0.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.4	17.8	17.6	11.1	18.1	18.0	17.5	0.0	19.6	20.3	0.0	16.9
LnGrp LOS	B	B	B	B	B	B	B	A	B	C	A	B
Approach Vol, veh/h	766			1057			271			196		
Approach Delay, s/veh	16.9			16.8			19.4			17.5		
Approach LOS	B			B			B			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.4	25.1		22.6	8.5	27.0		22.6				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	9.7	18.7		18.1	5.9	22.5		18.1				
Max Q Clear Time (g_c+I1), s	6.0	10.4		10.6	4.0	12.9		9.2				
Green Ext Time (p_c), s	0.2	2.4		0.6	0.0	3.4		1.0				
Intersection Summary												
HCM 6th Ctrl Delay				17.2								
HCM 6th LOS				B								

HCM 6th TWSC
3: 20th St & South St

12/23/2021

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	658	342	0	1042	4	0	0	90	1	0	6
Future Vol, veh/h	1	658	342	0	1042	4	0	0	90	1	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Free	-	-	None	-	-	Yield	-	-	None
Storage Length	200	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	1	715	372	0	1133	4	0	0	98	1	0	7

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	1137	0	-	0
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.12	-	-	6.92
Critical Hdwy Stg 1	-	-	-	6.52
Critical Hdwy Stg 2	-	-	-	6.52
Follow-up Hdwy	2.21	-	-	3.31
Pot Cap-1 Maneuver	616	0	0	641
Stage 1	-	0	0	-
Stage 2	-	0	0	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	616	-	-	641
Mov Cap-2 Maneuver	-	-	-	73
Stage 1	-	-	-	217
Stage 2	-	-	-	536

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	11.6	19
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	641	616	-	-	-	264
HCM Lane V/C Ratio	0.153	0.002	-	-	-	0.029
HCM Control Delay (s)	11.6	10.9	-	-	-	19
HCM Lane LOS	B	B	-	-	-	C
HCM 95th %tile Q(veh)	0.5	0	-	-	-	0.1

Intersection												
Int Delay, s/veh	3.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	35	724	61	16	858	47	50	1	27	15	0	32
Future Vol, veh/h	35	724	61	16	858	47	50	1	27	15	0	32
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	-	200	-	-	100	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	38	787	66	17	933	51	54	1	29	16	0	35

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	984	0	0	853	0	0	1397	1914	427	1463	1922	492
Stage 1	-	-	-	-	-	-	896	896	-	993	993	-
Stage 2	-	-	-	-	-	-	501	1018	-	470	929	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.52	6.52	6.92	7.52	6.52	6.92
Critical Hdwy Stg 1	-	-	-	-	-	-	6.52	5.52	-	6.52	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.52	5.52	-	6.52	5.52	-
Follow-up Hdwy	2.21	-	-	2.21	-	-	3.51	4.01	3.31	3.51	4.01	3.31
Pot Cap-1 Maneuver	704	-	-	788	-	-	101	68	579	91	67	525
Stage 1	-	-	-	-	-	-	304	359	-	265	324	-
Stage 2	-	-	-	-	-	-	523	315	-	546	347	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	704	-	-	788	-	-	89	63	579	80	62	525
Mov Cap-2 Maneuver	-	-	-	-	-	-	89	63	-	80	62	-
Stage 1	-	-	-	-	-	-	288	340	-	251	317	-
Stage 2	-	-	-	-	-	-	478	308	-	489	328	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.4			0.2			65.7			31		
HCM LOS							F			D		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	89	448	704	-	-	788	-	-	189
HCM Lane V/C Ratio	0.611	0.068	0.054	-	-	0.022	-	-	0.27
HCM Control Delay (s)	94.9	13.6	10.4	-	-	9.7	-	-	31
HCM Lane LOS	F	B	B	-	-	A	-	-	D
HCM 95th %tile Q(veh)	2.8	0.2	0.2	-	-	0.1	-	-	1

HCM 6th TWSC
20: Hwy W/Salers Ln & South St

12/23/2021

Intersection												
Int Delay, s/veh	2.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	293	79	5	359	11	93	1	15	2	1	3
Future Vol, veh/h	3	293	79	5	359	11	93	1	15	2	1	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	3	318	86	5	390	12	101	1	16	2	1	3
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	402	0	0	404	0	0	775	779	361	782	816	396
Stage 1	-	-	-	-	-	-	367	367	-	406	406	-
Stage 2	-	-	-	-	-	-	408	412	-	376	410	-
Critical Hdwy	4.11	-	-	4.11	-	-	7.11	6.51	6.21	7.11	6.51	6.21
Critical Hdwy Stg 1	-	-	-	-	-	-	6.11	5.51	-	6.11	5.51	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.11	5.51	-	6.11	5.51	-
Follow-up Hdwy	2.209	-	-	2.209	-	-	3.509	4.009	3.309	3.509	4.009	3.309
Pot Cap-1 Maneuver	1162	-	-	1160	-	-	316	328	686	313	313	656
Stage 1	-	-	-	-	-	-	655	624	-	624	600	-
Stage 2	-	-	-	-	-	-	622	596	-	647	597	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1162	-	-	1160	-	-	312	325	686	303	310	656
Mov Cap-2 Maneuver	-	-	-	-	-	-	312	325	-	303	310	-
Stage 1	-	-	-	-	-	-	653	622	-	622	596	-
Stage 2	-	-	-	-	-	-	614	592	-	629	595	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.1			21.4			13.8		
HCM LOS							C			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	337	1162	-	-	1160	-	-	417				
HCM Lane V/C Ratio	0.352	0.003	-	-	0.005	-	-	0.016				
HCM Control Delay (s)	21.4	8.1	0	-	8.1	0	-	13.8				
HCM Lane LOS	C	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	1.5	0	-	-	0	-	-	0				

Intersection												
Int Delay, s/veh	2.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	42	246	17	1	287	3	17	4	2	9	1	59
Future Vol, veh/h	42	246	17	1	287	3	17	4	2	9	1	59
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	46	267	18	1	312	3	18	4	2	10	1	64

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	315	0	0	285	0	0	716	685	276	687	693	314
Stage 1	-	-	-	-	-	-	368	368	-	316	316	-
Stage 2	-	-	-	-	-	-	348	317	-	371	377	-
Critical Hdwy	4.11	-	-	4.11	-	-	7.11	6.51	6.21	7.11	6.51	6.21
Critical Hdwy Stg 1	-	-	-	-	-	-	6.11	5.51	-	6.11	5.51	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.11	5.51	-	6.11	5.51	-
Follow-up Hdwy	2.209	-	-	2.209	-	-	3.509	4.009	3.309	3.509	4.009	3.309
Pot Cap-1 Maneuver	1251	-	-	1283	-	-	347	372	765	362	368	729
Stage 1	-	-	-	-	-	-	654	623	-	697	657	-
Stage 2	-	-	-	-	-	-	670	656	-	651	618	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1251	-	-	1283	-	-	305	355	765	345	351	729
Mov Cap-2 Maneuver	-	-	-	-	-	-	305	355	-	345	351	-
Stage 1	-	-	-	-	-	-	625	596	-	666	656	-
Stage 2	-	-	-	-	-	-	609	655	-	616	591	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.1	0	16.8	11.5
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	330	1251	-	-	1283	-	-	628
HCM Lane V/C Ratio	0.076	0.036	-	-	0.001	-	-	0.119
HCM Control Delay (s)	16.8	8	0	-	7.8	0	-	11.5
HCM Lane LOS	C	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.2	0.1	-	-	0	-	-	0.4

HCM 6th Signalized Intersection Summary

14: 3rd St & South St

12/23/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	102	402	59	30	1065	273	185	115	52	148	66	157
Future Volume (veh/h)	102	402	59	30	1065	273	185	115	52	148	66	157
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	111	437	0	33	1158	0	201	125	0	161	72	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	276	1743		534	1669		251	385		230	709	
Arrive On Green	0.05	0.49	0.00	0.03	0.47	0.00	0.07	0.21	0.00	0.07	0.20	0.00
Sat Flow, veh/h	1767	3618	0	1767	3618	0	3428	1856	1572	3428	3526	1572
Grp Volume(v), veh/h	111	437	0	33	1158	0	201	125	0	161	72	0
Grp Sat Flow(s),veh/h/ln	1767	1763	0	1767	1763	0	1714	1856	1572	1714	1763	1572
Q Serve(g_s), s	2.9	6.4	0.0	0.8	23.2	0.0	5.2	5.2	0.0	4.1	1.5	0.0
Cycle Q Clear(g_c), s	2.9	6.4	0.0	0.8	23.2	0.0	5.2	5.2	0.0	4.1	1.5	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	276	1743		534	1669		251	385		230	709	
V/C Ratio(X)	0.40	0.25		0.06	0.69		0.80	0.32		0.70	0.10	
Avail Cap(c_a), veh/h	292	1743		579	1669		251	385		236	709	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.19	0.19	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	14.7	13.1	0.0	11.4	18.6	0.0	41.0	30.3	0.0	41.1	29.3	0.0
Incr Delay (d2), s/veh	0.9	0.3	0.0	0.0	0.5	0.0	16.5	2.2	0.0	8.6	0.3	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	1.0	2.4	0.0	0.3	8.4	0.0	2.7	2.5	0.0	2.0	0.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.6	13.5	0.0	11.4	19.0	0.0	57.6	32.5	0.0	49.7	29.6	0.0
LnGrp LOS	B	B		B	B		E	C		D	C	
Approach Vol, veh/h		548	A		1191	A		326	A		233	A
Approach Delay, s/veh		13.9			18.8			48.0			43.5	
Approach LOS		B			B			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.3	49.0	11.1	22.6	9.2	47.1	10.5	23.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.1	42.2	6.6	18.1	5.5	41.8	6.2	18.5				
Max Q Clear Time (g_c+I1), s	2.8	8.4	7.2	3.5	4.9	25.2	6.1	7.2				
Green Ext Time (p_c), s	0.0	2.8	0.0	0.2	0.0	7.1	0.0	0.4				
Intersection Summary												
HCM 6th Ctrl Delay			24.3									
HCM 6th LOS			C									
Notes												
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary

17: 6th St & South St

12/23/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	436	93	9	960	20	350	21	16	16	9	34
Future Volume (veh/h)	22	436	93	9	960	20	350	21	16	16	9	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	24	474	0	10	1043	22	380	23	17	17	10	37
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	108	1111		458	1084	23	458	559	473	477	104	385
Arrive On Green	0.40	0.40	0.00	0.60	0.60	0.60	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	526	1856	1572	913	1810	38	1348	1856	1572	1356	346	1279
Grp Volume(v), veh/h	24	474	0	10	0	1065	380	23	17	17	0	47
Grp Sat Flow(s),veh/h/ln	526	1856	1572	913	0	1849	1348	1856	1572	1356	0	1625
Q Serve(g_s), s	4.1	16.6	0.0	0.6	0.0	49.1	25.2	0.8	0.7	0.8	0.0	1.9
Cycle Q Clear(g_c), s	53.1	16.6	0.0	17.2	0.0	49.1	27.1	0.8	0.7	1.6	0.0	1.9
Prop In Lane	1.00		1.00	1.00		0.02	1.00		1.00	1.00		0.79
Lane Grp Cap(c), veh/h	108	1111		458	0	1107	458	559	473	477	0	489
V/C Ratio(X)	0.22	0.43		0.02	0.00	0.96	0.83	0.04	0.04	0.04	0.00	0.10
Avail Cap(c_a), veh/h	108	1111		458	0	1107	458	559	473	477	0	489
HCM Platoon Ratio	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.94	0.94	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	51.1	15.8	0.0	15.6	0.0	17.1	32.5	22.3	22.2	22.8	0.0	22.6
Incr Delay (d2), s/veh	4.4	1.1	0.0	0.0	0.0	18.5	12.2	0.0	0.0	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	7.5	0.0	0.1	0.0	21.9	9.5	0.3	0.3	0.3	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.5	16.9	0.0	15.6	0.0	35.6	44.6	22.3	22.3	22.9	0.0	22.7
LnGrp LOS	E	B		B	A	D	D	C	C	C	A	C
Approach Vol, veh/h	498		A	1075			420			64		
Approach Delay, s/veh	18.8			35.4			42.5			22.8		
Approach LOS	B			D			D			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	58.4			31.6			58.4			31.6		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	53.9			27.1			53.9			27.1		
Max Q Clear Time (g_c+l1), s	55.1			3.9			51.1			29.1		
Green Ext Time (p_c), s	0.0			0.2			1.9			0.0		

Intersection Summary

HCM 6th Ctrl Delay	32.4
HCM 6th LOS	C

Notes

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

HCM 6th Signalized Intersection Summary

7: 19th St & South St

12/23/2021

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	595	101	92	1421	143	40
Future Volume (veh/h)	595	101	92	1421	143	40
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	647	0	100	1545	155	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	2053		550	2409	743	
Arrive On Green	0.58	0.00	0.10	1.00	0.22	0.00
Sat Flow, veh/h	3711	0	1767	3618	3428	1572
Grp Volume(v), veh/h	647	0	100	1545	155	0
Grp Sat Flow(s),veh/h/ln	1763	0	1767	1763	1714	1572
Q Serve(g_s), s	8.4	0.0	1.9	0.0	3.3	0.0
Cycle Q Clear(g_c), s	8.4	0.0	1.9	0.0	3.3	0.0
Prop In Lane		0.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2053		550	2409	743	
V/C Ratio(X)	0.32		0.18	0.64	0.21	
Avail Cap(c_a), veh/h	2053		607	2409	743	
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.68	0.68	1.00	0.00
Uniform Delay (d), s/veh	9.6	0.0	6.0	0.0	28.9	0.0
Incr Delay (d2), s/veh	0.4	0.0	0.1	0.9	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	0.0	0.5	0.3	1.4	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	10.0	0.0	6.1	0.9	29.6	0.0
LnGrp LOS	B		A	A	C	
Approach Vol, veh/h	647	A		1645	155	A
Approach Delay, s/veh	10.0			1.2	29.6	
Approach LOS	B			A	C	
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.1	56.9		24.0		66.0
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s	7.5	49.5		19.5		61.5
Max Q Clear Time (g_c+I1), s	3.9	10.4		5.3		2.0
Green Ext Time (p_c), s	0.1	4.5		0.4		17.0
Intersection Summary						
HCM 6th Ctrl Delay			5.3			
HCM 6th LOS			A			

Notes

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

HCM 6th Signalized Intersection Summary

8: 17th St & South St

12/23/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	599	9	49	1370	16	21	5	47	30	11	131
Future Volume (veh/h)	44	599	9	49	1370	16	21	5	47	30	11	131
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	48	651	10	53	1489	17	23	5	51	33	12	142
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	260	2145	33	615	2162	25	227	29	298	316	25	302
Arrive On Green	0.08	1.00	1.00	0.04	0.61	0.61	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	1767	3554	55	1767	3570	41	1223	142	1452	1337	124	1467
Grp Volume(v), veh/h	48	323	338	53	735	771	23	0	56	33	0	154
Grp Sat Flow(s),veh/h/ln	1767	1763	1846	1767	1763	1848	1223	0	1594	1337	0	1591
Q Serve(g_s), s	0.9	0.0	0.0	1.0	25.4	25.4	1.5	0.0	2.6	1.9	0.0	7.7
Cycle Q Clear(g_c), s	0.9	0.0	0.0	1.0	25.4	25.4	9.2	0.0	2.6	4.5	0.0	7.7
Prop In Lane	1.00		0.03	1.00		0.02	1.00		0.91	1.00		0.92
Lane Grp Cap(c), veh/h	260	1064	1114	615	1068	1119	227	0	328	316	0	327
V/C Ratio(X)	0.18	0.30	0.30	0.09	0.69	0.69	0.10	0.00	0.17	0.10	0.00	0.47
Avail Cap(c_a), veh/h	309	1064	1114	647	1068	1119	227	0	328	316	0	327
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.94	0.94	0.94	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.6	0.0	0.0	5.9	12.0	12.0	35.5	0.0	29.4	31.3	0.0	31.4
Incr Delay (d2), s/veh	0.3	0.7	0.7	0.1	3.6	3.5	0.9	0.0	1.1	0.7	0.0	4.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.2	0.2	0.3	9.0	9.4	0.5	0.0	1.1	0.7	0.0	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.9	0.7	0.7	5.9	15.6	15.5	36.4	0.0	30.6	31.9	0.0	36.2
LnGrp LOS	A	A	A	A	B	B	D	A	C	C	A	D
Approach Vol, veh/h	709			1559			79			187		
Approach Delay, s/veh	1.3			15.2			32.3			35.5		
Approach LOS	A			B			C			D		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.2	58.8		23.0	8.0	59.0		23.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.3	52.7		18.5	6.0	52.0		18.5				
Max Q Clear Time (g_c+I1), s	3.0	2.0		9.7	2.9	27.4		11.2				
Green Ext Time (p_c), s	0.0	4.0		0.6	0.0	11.1		0.1				
Intersection Summary												
HCM 6th Ctrl Delay	13.4											
HCM 6th LOS	B											

HCM 6th TWSC
3: 20th St & South St

12/23/2021

Intersection												
Int Delay, s/veh	0.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	668	116	0	1561	1	0	0	20	1	0	12
Future Vol, veh/h	4	668	116	0	1561	1	0	0	20	1	0	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Free	-	-	None	-	-	Yield	-	-	None
Storage Length	200	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	4	726	126	0	1697	1	0	0	22	1	0	13

Major/Minor	Major1		Major2		Minor1		Minor2	
Conflicting Flow All	1698	0	-	-	-	0	-	-
Stage 1	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-
Critical Hdwy	4.16	-	-	-	-	-	6.96	7.56
Critical Hdwy Stg 1	-	-	-	-	-	-	-	6.56
Critical Hdwy Stg 2	-	-	-	-	-	-	-	6.56
Follow-up Hdwy	2.23	-	-	-	-	-	3.33	3.53
Pot Cap-1 Maneuver	367	-	0	0	-	-	0	0
Stage 1	-	-	0	0	-	-	0	0
Stage 2	-	-	0	0	-	-	0	0
Platoon blocked, %	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	367	-	-	-	-	-	-	631
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	30
Stage 1	-	-	-	-	-	-	-	94
Stage 2	-	-	-	-	-	-	-	591

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	10.9	27
HCM LOS			B	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	631	367	-	-	-	178
HCM Lane V/C Ratio	0.034	0.012	-	-	-	0.079
HCM Control Delay (s)	10.9	14.9	-	-	-	27
HCM Lane LOS	B	B	-	-	-	D
HCM 95th %tile Q(veh)	0.1	0	-	-	-	0.3

HCM 6th TWSC
11: 15th St & South St

12/23/2021

Intersection												
Int Delay, s/veh	9.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	662	24	26	1357	15	82	0	29	0	0	2
Future Vol, veh/h	1	662	24	26	1357	15	82	0	29	0	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	-	200	-	-	100	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	1	720	26	28	1475	16	89	0	32	0	0	2
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1491	0	0	746	0	0	1529	2282	373	1901	2287	746
Stage 1	-	-	-	-	-	-	735	735	-	1539	1539	-
Stage 2	-	-	-	-	-	-	794	1547	-	362	748	-
Critical Hdwy	4.16	-	-	4.16	-	-	7.56	6.56	6.96	7.56	6.56	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-	6.56	5.56	-	6.56	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.56	5.56	-	6.56	5.56	-
Follow-up Hdwy	2.23	-	-	2.23	-	-	3.53	4.03	3.33	3.53	4.03	3.33
Pot Cap-1 Maneuver	442	-	-	851	-	-	~ 79	39	622	42	38	354
Stage 1	-	-	-	-	-	-	375	421	-	120	174	-
Stage 2	-	-	-	-	-	-	345	172	-	626	415	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	442	-	-	851	-	-	~ 76	38	622	39	37	354
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 76	38	-	39	37	-
Stage 1	-	-	-	-	-	-	374	420	-	120	168	-
Stage 2	-	-	-	-	-	-	332	166	-	593	414	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.2			190.6			15.2		
HCM LOS							F			C		
Minor Lane/Major Mvmt	NBLn1 NBLn2		EBL	EBT	EBR	WBL	WBT	WBR	SBLn1			
Capacity (veh/h)	76 622		442	-	-	851	-	-	354			
HCM Lane V/C Ratio	1.173 0.051		0.002	-	-	0.033	-	-	0.006			
HCM Control Delay (s)	254.1 11.1		13.2	-	-	9.4	-	-	15.2			
HCM Lane LOS	F B		B	-	-	A	-	-	C			
HCM 95th %tile Q(veh)	6.7 0.2		0	-	-	0.1	-	-	0			
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s			+: Computation Not Defined				*: All major volume in platoon			

Intersection												
Int Delay, s/veh	33.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	21	219	49	20	565	5	193	32	22	5	2	6
Future Vol, veh/h	21	219	49	20	565	5	193	32	22	5	2	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	23	238	53	22	614	5	210	35	24	5	2	7
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	619	0	0	291	0	0	976	974	265	1001	998	617
Stage 1	-	-	-	-	-	-	311	311	-	661	661	-
Stage 2	-	-	-	-	-	-	665	663	-	340	337	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	956	-	-	1265	-	-	229	251	771	221	243	488
Stage 1	-	-	-	-	-	-	697	656	-	450	458	-
Stage 2	-	-	-	-	-	-	448	457	-	673	639	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	956	-	-	1265	-	-	215	237	771	182	230	488
Mov Cap-2 Maneuver	-	-	-	-	-	-	215	237	-	182	230	-
Stage 1	-	-	-	-	-	-	677	637	-	437	446	-
Stage 2	-	-	-	-	-	-	428	445	-	599	620	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.6			0.3			150.6			19.2		
HCM LOS							F			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	233	956	-	-	1265	-	-	268				
HCM Lane V/C Ratio	1.152	0.024	-	-	0.017	-	-	0.053				
HCM Control Delay (s)	150.6	8.9	0	-	7.9	0	-	19.2				
HCM Lane LOS	F	A	A	-	A	A	-	C				
HCM 95th %tile Q(veh)	12.5	0.1	-	-	0.1	-	-	0.2				

Intersection												
Int Delay, s/veh	3.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	40	194	9	1	489	29	34	16	4	26	2	72
Future Vol, veh/h	40	194	9	1	489	29	34	16	4	26	2	72
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	43	211	10	1	532	32	37	17	4	28	2	78
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	564	0	0	221	0	0	892	868	216	863	857	548
Stage 1	-	-	-	-	-	-	302	302	-	550	550	-
Stage 2	-	-	-	-	-	-	590	566	-	313	307	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1003	-	-	1342	-	-	262	289	821	274	294	534
Stage 1	-	-	-	-	-	-	705	662	-	518	514	-
Stage 2	-	-	-	-	-	-	492	506	-	696	659	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1003	-	-	1342	-	-	214	275	821	250	279	534
Mov Cap-2 Maneuver	-	-	-	-	-	-	214	275	-	250	279	-
Stage 1	-	-	-	-	-	-	670	630	-	493	513	-
Stage 2	-	-	-	-	-	-	418	505	-	640	627	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.4			0			24.5			17		
HCM LOS							C			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	243	1003	-	-	1342	-	-	407				
HCM Lane V/C Ratio	0.242	0.043	-	-	0.001	-	-	0.267				
HCM Control Delay (s)	24.5	8.8	0	-	7.7	0	-	17				
HCM Lane LOS	C	A	A	-	A	A	-	C				
HCM 95th %tile Q(veh)	0.9	0.1	-	-	0	-	-	1.1				

HCM 6th Signalized Intersection Summary

14: 3rd St & South St

12/23/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	251	1090	169	60	645	244	102	97	70	299	128	199
Future Volume (veh/h)	251	1090	169	60	645	244	102	97	70	299	128	199
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	273	1185	0	65	701	0	111	105	0	325	139	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	486	1847		267	1633		168	308		390	813	
Arrive On Green	0.10	0.52	0.00	0.04	0.46	0.00	0.05	0.16	0.00	0.11	0.23	0.00
Sat Flow, veh/h	1781	3647	0	1781	3647	0	3456	1870	1585	3456	3554	1585
Grp Volume(v), veh/h	273	1185	0	65	701	0	111	105	0	325	139	0
Grp Sat Flow(s),veh/h/ln	1781	1777	0	1781	1777	0	1728	1870	1585	1728	1777	1585
Q Serve(g_s), s	8.4	26.4	0.0	2.1	14.6	0.0	3.5	5.5	0.0	10.1	3.5	0.0
Cycle Q Clear(g_c), s	8.4	26.4	0.0	2.1	14.6	0.0	3.5	5.5	0.0	10.1	3.5	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	486	1847		267	1633		168	308		390	813	
V/C Ratio(X)	0.56	0.64		0.24	0.43		0.66	0.34		0.83	0.17	
Avail Cap(c_a), veh/h	625	1847		287	1633		236	308		456	813	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.75	0.75	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	13.6	19.0	0.0	16.4	20.0	0.0	51.4	40.7	0.0	47.8	34.0	0.0
Incr Delay (d2), s/veh	1.0	1.7	0.0	0.3	0.6	0.0	4.4	3.0	0.0	11.1	0.5	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	10.3	0.0	0.8	5.8	0.0	1.6	2.8	0.0	4.9	1.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.6	20.8	0.0	16.8	20.6	0.0	55.9	43.7	0.0	58.9	34.5	0.0
LnGrp LOS	B	C		B	C		E	D		E	C	
Approach Vol, veh/h		1458	A		766	A		216	A		464	A
Approach Delay, s/veh		19.6			20.3			49.9			51.6	
Approach LOS		B			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.8	61.7	9.8	29.7	15.4	55.1	16.9	22.6				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.5	53.9	7.5	25.1	19.5	39.9	14.5	18.1				
Max Q Clear Time (g_c+I1), s	4.1	28.4	5.5	5.5	10.4	16.6	12.1	7.5				
Green Ext Time (p_c), s	0.0	8.9	0.1	0.7	0.5	4.5	0.3	0.3				

Intersection Summary

HCM 6th Ctrl Delay 27.2

HCM 6th LOS C

Notes

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

HCM 6th Signalized Intersection Summary

17: 6th St & South St

12/23/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	1046	336	15	673	5	209	12	34	19	15	26
Future Volume (veh/h)	17	1046	336	15	673	5	209	12	34	19	15	26
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	18	1137	0	16	732	5	227	13	37	21	16	28
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	446	1336		419	1325	9	314	382	323	334	125	218
Arrive On Green	1.00	1.00	0.00	0.71	0.71	0.71	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	721	1870	1585	495	1855	13	1362	1870	1585	1355	610	1068
Grp Volume(v), veh/h	18	1137	0	16	0	737	227	13	37	21	0	44
Grp Sat Flow(s),veh/h/ln	721	1870	1585	495	0	1868	1362	1870	1585	1355	0	1678
Q Serve(g_s), s	0.7	0.0	0.0	1.1	0.0	20.5	18.0	0.6	2.1	1.4	0.0	2.4
Cycle Q Clear(g_c), s	21.2	0.0	0.0	1.1	0.0	20.5	20.3	0.6	2.1	2.0	0.0	2.4
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	1.00		0.64
Lane Grp Cap(c), veh/h	446	1336		419	0	1334	314	382	323	334	0	342
V/C Ratio(X)	0.04	0.85		0.04	0.00	0.55	0.72	0.03	0.11	0.06	0.00	0.13
Avail Cap(c_a), veh/h	446	1336		419	0	1334	327	400	339	347	0	359
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.59	0.59	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	2.8	0.0	0.0	4.6	0.0	7.4	44.1	35.1	35.7	35.9	0.0	35.8
Incr Delay (d2), s/veh	0.1	4.3	0.0	0.0	0.0	0.5	7.3	0.0	0.2	0.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	1.6	0.0	0.1	0.0	6.5	6.7	0.3	0.8	0.5	0.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	2.9	4.3	0.0	4.7	0.0	7.9	51.4	35.1	35.8	36.0	0.0	35.9
LnGrp LOS	A	A		A	A	A	D	D	D	D	A	D
Approach Vol, veh/h	1155		A	753			277			65		
Approach Delay, s/veh	4.3			7.9			48.6			36.0		
Approach LOS	A			A			D			D		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	83.1			26.9			83.1			26.9		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	77.5			23.5			77.5			23.5		
Max Q Clear Time (g_c+I1), s	23.2			4.4			22.5			22.3		
Green Ext Time (p_c), s	13.3			0.2			5.8			0.1		

Intersection Summary

HCM 6th Ctrl Delay 11.8

HCM 6th LOS B

Notes

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

HCM 6th Signalized Intersection Summary

7: 19th St & South St

12/23/2021

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑↑	↵↵	↵
Traffic Volume (veh/h)	1273	163	239	824	461	168
Future Volume (veh/h)	1273	163	239	824	461	168
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1384	0	260	896	501	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1977		344	2468	710	
Arrive On Green	0.56	0.00	0.18	1.00	0.21	0.00
Sat Flow, veh/h	3741	0	1781	3647	3456	1585
Grp Volume(v), veh/h	1384	0	260	896	501	0
Grp Sat Flow(s),veh/h/ln	1777	0	1781	1777	1728	1585
Q Serve(g_s), s	25.5	0.0	5.6	0.0	12.1	0.0
Cycle Q Clear(g_c), s	25.5	0.0	5.6	0.0	12.1	0.0
Prop In Lane		0.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1977		344	2468	710	
V/C Ratio(X)	0.70		0.76	0.36	0.71	
Avail Cap(c_a), veh/h	1977		454	2468	710	
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.80	0.80	1.00	0.00
Uniform Delay (d), s/veh	14.5	0.0	13.9	0.0	33.2	0.0
Incr Delay (d2), s/veh	2.1	0.0	4.1	0.3	5.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.1	0.0	2.8	0.1	5.5	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	16.6	0.0	18.0	0.3	39.0	0.0
LnGrp LOS	B		B	A	D	
Approach Vol, veh/h	1384	A		1156	501	A
Approach Delay, s/veh	16.6			4.3	39.0	
Approach LOS	B			A	D	
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	12.4	54.6		23.0		67.0
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s	13.5	44.5		18.5		62.5
Max Q Clear Time (g_c+I1), s	7.6	27.5		14.1		2.0
Green Ext Time (p_c), s	0.4	8.8		0.8		6.9
Intersection Summary						
HCM 6th Ctrl Delay			15.6			
HCM 6th LOS			B			

Notes

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

HCM 6th Signalized Intersection Summary

8: 17th St & South St

12/23/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	168	1238	24	128	939	37	29	41	208	71	39	137
Future Volume (veh/h)	168	1238	24	128	939	37	29	41	208	71	39	137
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	183	1346	26	139	1021	40	32	45	226	77	42	149
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	398	2023	39	329	1932	76	230	62	309	161	82	291
Arrive On Green	0.09	0.75	0.75	0.05	0.55	0.55	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1781	3566	69	1781	3486	137	1192	270	1356	1108	361	1279
Grp Volume(v), veh/h	183	670	702	139	520	541	32	0	271	77	0	191
Grp Sat Flow(s),veh/h/ln	1781	1777	1858	1781	1777	1846	1192	0	1626	1108	0	1640
Q Serve(g_s), s	3.9	16.7	16.8	3.0	16.6	16.6	2.2	0.0	13.9	6.2	0.0	9.2
Cycle Q Clear(g_c), s	3.9	16.7	16.8	3.0	16.6	16.6	11.3	0.0	13.9	20.1	0.0	9.2
Prop In Lane	1.00		0.04	1.00		0.07	1.00		0.83	1.00		0.78
Lane Grp Cap(c), veh/h	398	1008	1054	329	985	1023	230	0	370	161	0	374
V/C Ratio(X)	0.46	0.66	0.67	0.42	0.53	0.53	0.14	0.00	0.73	0.48	0.00	0.51
Avail Cap(c_a), veh/h	528	1008	1054	419	985	1023	230	0	370	161	0	374
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.46	0.46	0.46	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.3	6.8	6.8	9.5	12.7	12.7	35.3	0.0	32.2	41.5	0.0	30.4
Incr Delay (d2), s/veh	0.4	1.6	1.5	0.9	2.0	2.0	1.3	0.0	12.0	9.8	0.0	4.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	4.0	4.1	1.0	6.1	6.4	0.7	0.0	6.6	2.1	0.0	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.6	8.4	8.4	10.4	14.7	14.6	36.6	0.0	44.2	51.3	0.0	35.3
LnGrp LOS	A	A	A	B	B	B	D	A	D	D	A	D
Approach Vol, veh/h	1555				1200				303		268	
Approach Delay, s/veh	8.6				14.2				43.4		39.9	
Approach LOS	A				B				D		D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.4	55.6		25.0	10.6	54.4		25.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	9.5	46.5		20.5	12.7	43.3		20.5				
Max Q Clear Time (g_c+I1), s	5.0	18.8		22.1	5.9	18.6		15.9				
Green Ext Time (p_c), s	0.1	10.2		0.0	0.2	6.8		0.7				
Intersection Summary												
HCM 6th Ctrl Delay	16.3											
HCM 6th LOS	B											

HCM 6th Signalized Intersection Summary

14: 3rd St & South St

12/23/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	224	597	78	24	742	234	88	55	39	195	56	209
Future Volume (veh/h)	224	597	78	24	742	234	88	55	39	195	56	209
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	243	649	0	26	807	0	96	60	0	212	61	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	470	2093		492	1893		148	308		273	713	
Arrive On Green	0.08	0.58	0.00	0.02	0.53	0.00	0.04	0.16	0.00	0.08	0.20	0.00
Sat Flow, veh/h	1795	3676	0	1795	3676	0	3483	1885	1598	3483	3582	1598
Grp Volume(v), veh/h	243	649	0	26	807	0	96	60	0	212	61	0
Grp Sat Flow(s),veh/h/ln	1795	1791	0	1795	1791	0	1742	1885	1598	1742	1791	1598
Q Serve(g_s), s	7.0	11.0	0.0	0.8	16.5	0.0	3.3	3.3	0.0	7.2	1.7	0.0
Cycle Q Clear(g_c), s	7.0	11.0	0.0	0.8	16.5	0.0	3.3	3.3	0.0	7.2	1.7	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	470	2093		492	1893		148	308		273	713	
V/C Ratio(X)	0.52	0.31		0.05	0.43		0.65	0.20		0.78	0.09	
Avail Cap(c_a), veh/h	666	2093		525	1893		218	308		380	713	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.63	0.63	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	12.0	12.7	0.0	12.3	17.2	0.0	56.6	43.4	0.0	54.3	39.1	0.0
Incr Delay (d2), s/veh	0.9	0.4	0.0	0.0	0.4	0.0	4.8	1.4	0.0	6.6	0.2	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	4.2	0.0	0.3	6.4	0.0	1.5	1.7	0.0	3.4	0.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.8	13.0	0.0	12.3	17.7	0.0	61.3	44.8	0.0	60.9	39.4	0.0
LnGrp LOS	B	B		B	B		E	D		E	D	
Approach Vol, veh/h	892		A	833		A	156		A	273		A
Approach Delay, s/veh	13.0			17.5			55.0			56.1		
Approach LOS	B			B			D			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.4	74.6	9.6	28.4	14.1	67.9	13.9	24.1				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.1	65.5	7.5	23.9	22.7	47.9	13.1	18.3				
Max Q Clear Time (g_c+I1), s	2.8	13.0	5.3	3.7	9.0	18.5	9.2	5.3				
Green Ext Time (p_c), s	0.0	4.5	0.0	0.2	0.5	5.6	0.2	0.1				
Intersection Summary												
HCM 6th Ctrl Delay	23.2											
HCM 6th LOS	C											

HCM 6th Signalized Intersection Summary

17: 6th St & South St

12/23/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	579	164	12	746	12	215	12	21	14	7	11
Future Volume (veh/h)	22	579	164	12	746	12	215	12	21	14	7	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	24	629	0	13	811	13	234	13	23	15	8	12
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	362	1209		635	1187	19	400	393	333	401	142	213
Arrive On Green	1.00	1.00	0.00	0.64	0.64	0.64	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	670	1885	1598	803	1850	30	1403	1885	1598	1383	681	1021
Grp Volume(v), veh/h	24	629	0	13	0	824	234	13	23	15	0	20
Grp Sat Flow(s),veh/h/ln	670	1885	1598	803	0	1880	1403	1885	1598	1383	0	1701
Q Serve(g_s), s	1.0	0.0	0.0	0.4	0.0	16.8	9.6	0.3	0.7	0.5	0.0	0.6
Cycle Q Clear(g_c), s	17.8	0.0	0.0	0.4	0.0	16.8	10.2	0.3	0.7	0.9	0.0	0.6
Prop In Lane	1.00		1.00	1.00		0.02	1.00		1.00	1.00		0.60
Lane Grp Cap(c), veh/h	362	1209		635	0	1206	400	393	333	401	0	355
V/C Ratio(X)	0.07	0.52		0.02	0.00	0.68	0.59	0.03	0.07	0.04	0.00	0.06
Avail Cap(c_a), veh/h	362	1209		635	0	1206	530	569	482	530	0	513
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.92	0.92	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	3.9	0.0	0.0	3.9	0.0	6.9	23.1	18.9	19.1	19.3	0.0	19.0
Incr Delay (d2), s/veh	0.3	1.5	0.0	0.0	0.0	1.6	1.4	0.0	0.1	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.5	0.0	0.0	0.0	4.1	3.1	0.1	0.2	0.2	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.2	1.5	0.0	3.9	0.0	8.5	24.5	19.0	19.1	19.3	0.0	19.1
LnGrp LOS	A	A		A	A	A	C	B	B	B	A	B
Approach Vol, veh/h	653		A	837			270			35		
Approach Delay, s/veh	1.6			8.4			23.7			19.2		
Approach LOS	A			A			C			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	43.0			17.0			43.0			17.0		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	32.9			18.1			32.9			18.1		
Max Q Clear Time (g_c+I1), s	19.8			2.9			18.8			12.2		
Green Ext Time (p_c), s	3.3			0.1			4.8			0.4		
Intersection Summary												
HCM 6th Ctrl Delay	8.4											
HCM 6th LOS	A											

HCM 6th Signalized Intersection Summary

7: 19th St & South St

12/23/2021

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑	↘↗	↗
Traffic Volume (veh/h)	692	243	299	784	488	168
Future Volume (veh/h)	692	243	299	784	488	168
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	752	0	325	852	530	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1	1	1	1
Cap, veh/h	1800		563	2415	766	
Arrive On Green	0.50	0.00	0.24	1.00	0.22	0.00
Sat Flow, veh/h	3770	0	1795	3676	3483	1598
Grp Volume(v), veh/h	752	0	325	852	530	0
Grp Sat Flow(s),veh/h/ln	1791	0	1795	1791	1742	1598
Q Serve(g_s), s	11.2	0.0	7.4	0.0	11.9	0.0
Cycle Q Clear(g_c), s	11.2	0.0	7.4	0.0	11.9	0.0
Prop In Lane		0.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1800		563	2415	766	
V/C Ratio(X)	0.42		0.58	0.35	0.69	
Avail Cap(c_a), veh/h	1800		762	2415	766	
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.82	0.82	1.00	0.00
Uniform Delay (d), s/veh	13.3	0.0	7.3	0.0	30.5	0.0
Incr Delay (d2), s/veh	0.7	0.0	0.8	0.3	5.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	0.0	1.7	0.1	5.4	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	14.0	0.0	8.0	0.3	35.6	0.0
LnGrp LOS	B		A	A	D	
Approach Vol, veh/h	752	A		1177	530	A
Approach Delay, s/veh	14.0			2.5	35.6	
Approach LOS	B			A	D	
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	14.6	47.2		23.2		61.8
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s	19.5	33.3		18.7		57.3
Max Q Clear Time (g_c+I1), s	9.4	13.2		13.9		2.0
Green Ext Time (p_c), s	0.7	4.6		0.9		6.5
Intersection Summary						
HCM 6th Ctrl Delay			13.1			
HCM 6th LOS			B			

Notes

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

HCM 6th Signalized Intersection Summary

8: 17th St & South St

12/23/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	111	729	20	224	925	36	26	30	249	36	39	144
Future Volume (veh/h)	111	729	20	224	925	36	26	30	249	36	39	144
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	121	792	22	243	1005	39	28	33	271	39	42	157
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	373	1766	49	450	1873	73	264	45	366	172	88	329
Arrive On Green	0.02	0.16	0.16	0.09	0.53	0.53	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1795	3559	99	1795	3515	136	1193	176	1448	1084	348	1302
Grp Volume(v), veh/h	121	398	416	243	512	532	28	0	304	39	0	199
Grp Sat Flow(s),veh/h/ln	1795	1791	1867	1795	1791	1861	1193	0	1625	1084	0	1651
Q Serve(g_s), s	2.7	17.1	17.1	5.4	15.9	15.9	1.7	0.0	14.6	2.9	0.0	8.7
Cycle Q Clear(g_c), s	2.7	17.1	17.1	5.4	15.9	15.9	10.4	0.0	14.6	17.5	0.0	8.7
Prop In Lane	1.00		0.05	1.00		0.07	1.00		0.89	1.00		0.79
Lane Grp Cap(c), veh/h	373	889	927	450	954	991	264	0	411	172	0	418
V/C Ratio(X)	0.32	0.45	0.45	0.54	0.54	0.54	0.11	0.00	0.74	0.23	0.00	0.48
Avail Cap(c_a), veh/h	474	889	927	654	954	991	264	0	411	172	0	418
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.77	0.77	0.77	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.8	25.0	25.0	10.9	13.0	13.0	31.4	0.0	29.2	37.2	0.0	27.0
Incr Delay (d2), s/veh	0.4	1.3	1.2	1.0	2.2	2.1	0.8	0.0	11.4	3.0	0.0	3.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	8.3	8.6	1.8	5.9	6.1	0.6	0.0	6.8	0.9	0.0	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.2	26.3	26.3	11.9	15.2	15.1	32.2	0.0	40.5	40.3	0.0	30.8
LnGrp LOS	B	C	C	B	B	B	C	A	D	D	A	C
Approach Vol, veh/h	935			1287			332			238		
Approach Delay, s/veh	24.3			14.5			39.8			32.4		
Approach LOS	C			B			D			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.3	46.7		26.0	9.2	49.8		26.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	17.5	32.5		21.5	9.5	40.5		21.5				
Max Q Clear Time (g_c+l1), s	7.4	19.1		19.5	4.7	17.9		16.6				
Green Ext Time (p_c), s	0.5	3.8		0.2	0.1	6.5		0.9				
Intersection Summary												
HCM 6th Ctrl Delay	22.3											
HCM 6th LOS	C											

HCM 6th TWSC
3: 20th St & South St

12/23/2021

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	803	417	0	1271	5	0	0	110	1	0	7
Future Vol, veh/h	1	803	417	0	1271	5	0	0	110	1	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Free	-	-	None	-	-	Yield	-	-	None
Storage Length	200	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	1	873	453	0	1382	5	0	0	120	1	0	8

Major/Minor	Major1		Major2		Minor1		Minor2	
Conflicting Flow All	1387	0	-	-	-	0	-	-
Stage 1	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-
Critical Hdwy	4.12	-	-	-	-	-	6.92	7.52
Critical Hdwy Stg 1	-	-	-	-	-	-	-	6.52
Critical Hdwy Stg 2	-	-	-	-	-	-	-	6.52
Follow-up Hdwy	2.21	-	-	-	-	-	3.31	3.51
Pot Cap-1 Maneuver	495	-	0	0	-	-	0	0
Stage 1	-	-	0	0	-	-	0	0
Stage 2	-	-	0	0	-	-	0	0
Platoon blocked, %	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	495	-	-	-	-	-	-	570
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	39
Stage 1	-	-	-	-	-	-	-	152
Stage 2	-	-	-	-	-	-	-	449

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	13	25.7
HCM LOS			B	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	570	495	-	-	-	183
HCM Lane V/C Ratio	0.21	0.002	-	-	-	0.048
HCM Control Delay (s)	13	12.3	-	-	-	25.7
HCM Lane LOS	B	B	-	-	-	D
HCM 95th %tile Q(veh)	0.8	0	-	-	-	0.1

Intersection												
Int Delay, s/veh	12.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	42	884	75	20	1047	57	61	1	32	19	0	39
Future Vol, veh/h	42	884	75	20	1047	57	61	1	32	19	0	39
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	-	200	-	-	100	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	46	961	82	22	1138	62	66	1	35	21	0	42
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1200	0	0	1043	0	0	1707	2338	522	1786	2348	600
Stage 1	-	-	-	-	-	-	1094	1094	-	1213	1213	-
Stage 2	-	-	-	-	-	-	613	1244	-	573	1135	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.52	6.52	6.92	7.52	6.52	6.92
Critical Hdwy Stg 1	-	-	-	-	-	-	6.52	5.52	-	6.52	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.52	5.52	-	6.52	5.52	-
Follow-up Hdwy	2.21	-	-	2.21	-	-	3.51	4.01	3.31	3.51	4.01	3.31
Pot Cap-1 Maneuver	583	-	-	669	-	-	~ 60	37	502	52	36	447
Stage 1	-	-	-	-	-	-	230	290	-	194	255	-
Stage 2	-	-	-	-	-	-	449	246	-	474	278	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	583	-	-	669	-	-	~ 50	33	502	43	32	447
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 50	33	-	43	32	-
Stage 1	-	-	-	-	-	-	212	267	-	179	247	-
Stage 2	-	-	-	-	-	-	393	238	-	405	256	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.5			0.2			246.1			74.6		
HCM LOS							F			F		
Minor Lane/Major Mvmt	NBLn1 NBLn2		EBL	EBT	EBR	WBL	WBT	WBR	SBLn1			
Capacity (veh/h)	50 351		583	-	-	669	-	-	110			
HCM Lane V/C Ratio	1.326 0.102		0.078	-	-	0.032	-	-	0.573			
HCM Control Delay (s)	\$ 370.3 16.4		11.7	-	-	10.6	-	-	74.6			
HCM Lane LOS	F C		B	-	-	B	-	-	F			
HCM 95th %tile Q(veh)	6.1 0.3		0.3	-	-	0.1	-	-	2.7			
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s				+: Computation Not Defined				*: All major volume in platoon		

HCM 6th TWSC
20: Hwy W/Salers Ln & South St

12/23/2021

Intersection												
Int Delay, s/veh	4.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	357	96	6	438	14	113	1	19	2	1	4
Future Vol, veh/h	4	357	96	6	438	14	113	1	19	2	1	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	4	388	104	7	476	15	123	1	21	2	1	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	491	0	0	492	0	0	948	953	440	957	998	484
Stage 1	-	-	-	-	-	-	448	448	-	498	498	-
Stage 2	-	-	-	-	-	-	500	505	-	459	500	-
Critical Hdwy	4.11	-	-	4.11	-	-	7.11	6.51	6.21	7.11	6.51	6.21
Critical Hdwy Stg 1	-	-	-	-	-	-	6.11	5.51	-	6.11	5.51	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.11	5.51	-	6.11	5.51	-
Follow-up Hdwy	2.209	-	-	2.209	-	-	3.509	4.009	3.309	3.509	4.009	3.309
Pot Cap-1 Maneuver	1078	-	-	1077	-	-	242	260	619	238	245	585
Stage 1	-	-	-	-	-	-	592	575	-	556	546	-
Stage 2	-	-	-	-	-	-	555	542	-	584	545	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1078	-	-	1077	-	-	237	256	619	227	242	585
Mov Cap-2 Maneuver	-	-	-	-	-	-	237	256	-	227	242	-
Stage 1	-	-	-	-	-	-	589	572	-	553	541	-
Stage 2	-	-	-	-	-	-	545	537	-	561	542	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.1			34.9			15.4		
HCM LOS							D			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	260	1078	-	-	1077	-	-	354
HCM Lane V/C Ratio	0.556	0.004	-	-	0.006	-	-	0.021
HCM Control Delay (s)	34.9	8.4	0	-	8.4	0	-	15.4
HCM Lane LOS	D	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	3.1	0	-	-	0	-	-	0.1

Intersection												
Int Delay, s/veh	2.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	51	300	21	1	350	4	21	5	2	11	1	72
Future Vol, veh/h	51	300	21	1	350	4	21	5	2	11	1	72
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	55	326	23	1	380	4	23	5	2	12	1	78

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	384	0	0	349	0	0	872	834	338	835	843	382
Stage 1	-	-	-	-	-	-	448	448	-	384	384	-
Stage 2	-	-	-	-	-	-	424	386	-	451	459	-
Critical Hdwy	4.11	-	-	4.11	-	-	7.11	6.51	6.21	7.11	6.51	6.21
Critical Hdwy Stg 1	-	-	-	-	-	-	6.11	5.51	-	6.11	5.51	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.11	5.51	-	6.11	5.51	-
Follow-up Hdwy	2.209	-	-	2.209	-	-	3.509	4.009	3.309	3.509	4.009	3.309
Pot Cap-1 Maneuver	1180	-	-	1215	-	-	272	305	706	288	301	667
Stage 1	-	-	-	-	-	-	592	575	-	641	613	-
Stage 2	-	-	-	-	-	-	610	612	-	590	568	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1180	-	-	1215	-	-	228	287	706	270	283	667
Mov Cap-2 Maneuver	-	-	-	-	-	-	228	287	-	270	283	-
Stage 1	-	-	-	-	-	-	558	542	-	604	612	-
Stage 2	-	-	-	-	-	-	537	611	-	549	535	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.1	0	21.5	12.8
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	249	1180	-	-	1215	-	-	552
HCM Lane V/C Ratio	0.122	0.047	-	-	0.001	-	-	0.165
HCM Control Delay (s)	21.5	8.2	0	-	8	0	-	12.8
HCM Lane LOS	C	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.4	0.1	-	-	0	-	-	0.6

HCM 6th TWSC
3: 20th St & South St

12/23/2021

Intersection												
Int Delay, s/veh	1.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↱			↰↱				↰		↰↱	
Traffic Vol, veh/h	11	1349	361	0	1339	1	0	0	96	9	0	1
Future Vol, veh/h	11	1349	361	0	1339	1	0	0	96	9	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Free	-	-	None	-	-	Yield	-	-	None
Storage Length	200	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	1466	392	0	1455	1	0	0	104	10	0	1

Major/Minor	Major1		Major2		Minor1		Minor2	
Conflicting Flow All	1456	0	-	-	-	0	-	-
Stage 1	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-
Critical Hdwy	4.14	-	-	-	-	-	6.94	7.54
Critical Hdwy Stg 1	-	-	-	-	-	-	-	6.54
Critical Hdwy Stg 2	-	-	-	-	-	-	-	6.54
Follow-up Hdwy	2.22	-	-	-	-	-	3.32	3.52
Pot Cap-1 Maneuver	461	-	0	0	-	-	0	0
Stage 1	-	-	0	0	-	-	0	0
Stage 2	-	-	0	0	-	-	0	0
Platoon blocked, %	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	461	-	-	-	-	-	-	363
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	17
Stage 1	-	-	-	-	-	-	-	132
Stage 2	-	-	-	-	-	-	-	254

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	18.9	\$ 339.1
HCM LOS			C	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	363	461	-	-	-	19
HCM Lane V/C Ratio	0.287	0.026	-	-	-	0.572
HCM Control Delay (s)	18.9	13	-	-	-	\$ 339.1
HCM Lane LOS	C	B	-	-	-	F
HCM 95th %tile Q(veh)	1.2	0.1	-	-	-	1.6

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

Intersection												
Int Delay, s/veh	63.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↱		↰	↰↱		↰	↰			↰↱	
Traffic Vol, veh/h	29	1461	147	45	921	59	71	1	35	27	0	42
Future Vol, veh/h	29	1461	147	45	921	59	71	1	35	27	0	42
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	-	200	-	-	100	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	32	1588	160	49	1001	64	77	1	38	29	0	46

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1065	0	0	1748	0	0	2331	2895	874	1990	2943	533
Stage 1	-	-	-	-	-	-	1732	1732	-	1131	1131	-
Stage 2	-	-	-	-	-	-	599	1163	-	859	1812	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	650	-	-	355	-	-	~ 20	16	293	36	15	491
Stage 1	-	-	-	-	-	-	91	141	-	217	277	-
Stage 2	-	-	-	-	-	-	455	267	-	317	128	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	650	-	-	355	-	-	~ 16	13	293	~ 25	12	491
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 16	13	-	~ 25	12	-
Stage 1	-	-	-	-	-	-	87	134	-	206	239	-
Stage 2	-	-	-	-	-	-	356	230	-	260	122	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.7	\$ 1468.9	\$ 323.6
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	16	183	650	-	-	355	-	-	59
HCM Lane V/C Ratio	4.823	0.214	0.048	-	-	0.138	-	-	1.271
HCM Control Delay (s)	\$ 2198.6	29.9	10.8	-	-	16.8	-	-	\$ 323.6
HCM Lane LOS	F	D	B	-	-	C	-	-	F
HCM 95th %tile Q(veh)	10.4	0.8	0.2	-	-	0.5	-	-	6.4

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

HCM 6th TWSC
20: Hwy W/Salers Ln & South St

12/23/2021

Intersection												
Int Delay, s/veh	8.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	602	209	16	358	4	112	2	15	2	1	6
Future Vol, veh/h	2	602	209	16	358	4	112	2	15	2	1	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	654	227	17	389	4	122	2	16	2	1	7
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	393	0	0	881	0	0	1201	1199	768	1206	1310	391
Stage 1	-	-	-	-	-	-	772	772	-	425	425	-
Stage 2	-	-	-	-	-	-	429	427	-	781	885	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1166	-	-	767	-	-	162	185	402	160	159	658
Stage 1	-	-	-	-	-	-	392	409	-	607	586	-
Stage 2	-	-	-	-	-	-	604	585	-	388	363	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1166	-	-	767	-	-	156	179	402	148	154	658
Mov Cap-2 Maneuver	-	-	-	-	-	-	156	179	-	148	154	-
Stage 1	-	-	-	-	-	-	390	407	-	605	570	-
Stage 2	-	-	-	-	-	-	580	569	-	369	362	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.4			86.3			17		
HCM LOS							F			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	168	1166	-	-	767	-	-	309				
HCM Lane V/C Ratio	0.835	0.002	-	-	0.023	-	-	0.032				
HCM Control Delay (s)	86.3	8.1	0	-	9.8	0	-	17				
HCM Lane LOS	F	A	A	-	A	A	-	C				
HCM 95th %tile Q(veh)	5.7	0	-	-	0.1	-	-	0.1				

HCM 6th TWSC
23: Hwy JJ & South St

12/23/2021

Intersection												
Int Delay, s/veh	5.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	97	467	27	4	304	24	17	4	5	50	17	75
Future Vol, veh/h	97	467	27	4	304	24	17	4	5	50	17	75
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	105	508	29	4	330	26	18	4	5	54	18	82

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	356	0	0	537	0	0	1134	1097	523	1088	1098	343
Stage 1	-	-	-	-	-	-	733	733	-	351	351	-
Stage 2	-	-	-	-	-	-	401	364	-	737	747	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1203	-	-	1031	-	-	180	213	554	193	213	700
Stage 1	-	-	-	-	-	-	412	426	-	666	632	-
Stage 2	-	-	-	-	-	-	626	624	-	410	420	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1203	-	-	1031	-	-	133	186	554	169	186	700
Mov Cap-2 Maneuver	-	-	-	-	-	-	133	186	-	169	186	-
Stage 1	-	-	-	-	-	-	361	373	-	583	629	-
Stage 2	-	-	-	-	-	-	534	621	-	351	368	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.4	0.1	31.5	31.2
HCM LOS			D	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	164	1203	-	-	1031	-	-	287
HCM Lane V/C Ratio	0.172	0.088	-	-	0.004	-	-	0.538
HCM Control Delay (s)	31.5	8.3	0	-	8.5	0	-	31.2
HCM Lane LOS	D	A	A	-	A	A	-	D
HCM 95th %tile Q(veh)	0.6	0.3	-	-	0	-	-	3

HCM 6th Signalized Intersection Summary

14: 3rd St & South St

12/23/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	329	49	25	873	223	156	96	44	121	55	135
Future Volume (veh/h)	89	329	49	25	873	223	156	96	44	121	55	135
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	97	358	0	27	949	0	170	104	0	132	60	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	357	1909		616	1837		237	362		196	645	
Arrive On Green	0.05	0.54	0.00	0.03	0.52	0.00	0.07	0.20	0.00	0.06	0.18	0.00
Sat Flow, veh/h	1767	3618	0	1767	3618	0	3428	1856	1572	3428	3526	1572
Grp Volume(v), veh/h	97	358	0	27	949	0	170	104	0	132	60	0
Grp Sat Flow(s),veh/h/ln	1767	1763	0	1767	1763	0	1714	1856	1572	1714	1763	1572
Q Serve(g_s), s	2.5	5.2	0.0	0.7	17.6	0.0	4.9	4.8	0.0	3.8	1.4	0.0
Cycle Q Clear(g_c), s	2.5	5.2	0.0	0.7	17.6	0.0	4.9	4.8	0.0	3.8	1.4	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	357	1909		616	1837		237	362		196	645	
V/C Ratio(X)	0.27	0.19		0.04	0.52		0.72	0.29		0.67	0.09	
Avail Cap(c_a), veh/h	424	1909		659	1837		326	362		291	645	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.55	0.55	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	11.7	11.7	0.0	10.4	15.7	0.0	45.6	34.3	0.0	46.2	34.0	0.0
Incr Delay (d2), s/veh	0.4	0.2	0.0	0.0	0.6	0.0	4.6	2.0	0.0	4.0	0.3	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	0.9	1.9	0.0	0.2	6.5	0.0	2.2	2.3	0.0	1.7	0.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.2	11.9	0.0	10.5	16.3	0.0	50.2	36.3	0.0	50.2	34.2	0.0
LnGrp LOS	B	B		B	B		D	D		D	C	
Approach Vol, veh/h	455		A	976		A	274		A	192		A
Approach Delay, s/veh	12.0			16.1			44.9			45.2		
Approach LOS	B			B			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.1	58.6	11.4	22.8	9.2	56.6	10.2	24.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.1	49.1	9.5	18.3	8.5	45.7	8.5	19.3				
Max Q Clear Time (g_c+I1), s	2.7	7.2	6.9	3.4	4.5	19.6	5.8	6.8				
Green Ext Time (p_c), s	0.0	2.3	0.1	0.2	0.1	6.7	0.1	0.3				

Intersection Summary

HCM 6th Ctrl Delay 22.2

HCM 6th LOS C

Notes

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

HCM 6th Signalized Intersection Summary

17: 6th St & South St

12/23/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	358	77	7	787	16	287	17	13	13	7	28
Future Volume (veh/h)	18	358	77	7	787	16	287	17	13	13	7	28
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	20	389	0	8	855	17	312	18	14	14	8	30
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	277	1193		707	1166	23	411	495	420	427	91	342
Arrive On Green	1.00	1.00	0.00	0.64	0.64	0.64	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	630	1856	1572	987	1813	36	1359	1856	1572	1366	342	1283
Grp Volume(v), veh/h	20	389	0	8	0	872	312	18	14	14	0	38
Grp Sat Flow(s),veh/h/ln	630	1856	1572	987	0	1849	1359	1856	1572	1366	0	1625
Q Serve(g_s), s	1.7	0.0	0.0	0.3	0.0	31.8	22.4	0.7	0.7	0.8	0.0	1.8
Cycle Q Clear(g_c), s	33.5	0.0	0.0	0.3	0.0	31.8	24.1	0.7	0.7	1.5	0.0	1.8
Prop In Lane	1.00		1.00	1.00		0.02	1.00		1.00	1.00		0.79
Lane Grp Cap(c), veh/h	277	1193		707	0	1189	411	495	420	427	0	434
V/C Ratio(X)	0.07	0.33		0.01	0.00	0.73	0.76	0.04	0.03	0.03	0.00	0.09
Avail Cap(c_a), veh/h	277	1193		707	0	1189	476	584	495	493	0	512
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.97	0.97	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.3	0.0	0.0	6.4	0.0	12.1	36.6	27.1	27.1	27.7	0.0	27.5
Incr Delay (d2), s/veh	0.5	0.7	0.0	0.0	0.0	2.4	6.0	0.0	0.0	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.2	0.0	0.1	0.0	11.2	8.0	0.3	0.3	0.3	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.8	0.7	0.0	6.4	0.0	14.4	42.6	27.2	27.1	27.7	0.0	27.6
LnGrp LOS	A	A		A	A	B	D	C	C	C	A	C
Approach Vol, veh/h	409		A	880			344			52		
Approach Delay, s/veh	1.1			14.4			41.2			27.6		
Approach LOS	A			B			D			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	68.8			31.2			68.8			31.2		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	59.5			31.5			59.5			31.5		
Max Q Clear Time (g_c+l1), s	35.5			3.8			33.8			26.1		
Green Ext Time (p_c), s	2.3			0.2			6.6			0.6		

Intersection Summary

HCM 6th Ctrl Delay 17.0

HCM 6th LOS B

Notes

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

HCM 6th Signalized Intersection Summary

7: 19th St & South St

12/23/2021

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑↑	↵↵	↵
Traffic Volume (veh/h)	489	89	81	1171	133	37
Future Volume (veh/h)	489	89	81	1171	133	37
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	532	0	88	1273	145	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	2131		615	2450	737	
Arrive On Green	0.60	0.00	0.09	1.00	0.22	0.00
Sat Flow, veh/h	3711	0	1767	3618	3428	1572
Grp Volume(v), veh/h	532	0	88	1273	145	0
Grp Sat Flow(s), veh/h/ln	1763	0	1767	1763	1714	1572
Q Serve(g_s), s	7.0	0.0	1.7	0.0	3.5	0.0
Cycle Q Clear(g_c), s	7.0	0.0	1.7	0.0	3.5	0.0
Prop In Lane		0.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2131		615	2450	737	
V/C Ratio(X)	0.25		0.14	0.52	0.20	
Avail Cap(c_a), veh/h	2131		702	2450	737	
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.89	0.89	1.00	0.00
Uniform Delay (d), s/veh	9.2	0.0	5.9	0.0	32.2	0.0
Incr Delay (d2), s/veh	0.3	0.0	0.1	0.7	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	0.5	0.2	1.5	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	9.5	0.0	6.0	0.7	32.8	0.0
LnGrp LOS	A		A	A	C	
Approach Vol, veh/h	532	A		1361	145	A
Approach Delay, s/veh	9.5			1.0	32.8	
Approach LOS	A			A	C	
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.1	64.9		26.0		74.0
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s	9.5	55.5		21.5		69.5
Max Q Clear Time (g_c+I1), s	3.7	9.0		5.5		2.0
Green Ext Time (p_c), s	0.1	3.6		0.4		12.1
Intersection Summary						
HCM 6th Ctrl Delay			5.5			
HCM 6th LOS			A			

Notes

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

HCM 6th Signalized Intersection Summary

8: 17th St & South St

12/23/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	496	7	40	1133	13	18	4	40	24	9	107
Future Volume (veh/h)	36	496	7	40	1133	13	18	4	40	24	9	107
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	39	539	8	43	1232	14	20	4	43	26	10	116
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	383	2550	38	745	2567	29	118	15	165	188	14	166
Arrive On Green	0.07	1.00	1.00	0.03	0.72	0.72	0.11	0.11	0.11	0.11	0.11	0.11
Sat Flow, veh/h	1767	3556	53	1767	3570	41	1255	136	1458	1348	126	1465
Grp Volume(v), veh/h	39	267	280	43	608	638	20	0	47	26	0	126
Grp Sat Flow(s),veh/h/ln	1767	1763	1846	1767	1763	1848	1255	0	1593	1348	0	1592
Q Serve(g_s), s	0.6	0.0	0.0	0.6	14.8	14.8	1.6	0.0	2.7	1.8	0.0	7.6
Cycle Q Clear(g_c), s	0.6	0.0	0.0	0.6	14.8	14.8	9.2	0.0	2.7	4.5	0.0	7.6
Prop In Lane	1.00		0.03	1.00		0.02	1.00		0.91	1.00		0.92
Lane Grp Cap(c), veh/h	383	1264	1324	745	1267	1329	118	0	180	188	0	180
V/C Ratio(X)	0.10	0.21	0.21	0.06	0.48	0.48	0.17	0.00	0.26	0.14	0.00	0.70
Avail Cap(c_a), veh/h	440	1264	1324	785	1267	1329	234	0	327	312	0	326
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.97	0.97	0.97	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	4.2	0.0	0.0	3.2	6.0	6.0	47.1	0.0	40.5	42.6	0.0	42.7
Incr Delay (d2), s/veh	0.1	0.4	0.4	0.0	1.3	1.2	0.7	0.0	0.8	0.3	0.0	4.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.1	0.1	0.2	4.4	4.6	0.5	0.0	1.1	0.6	0.0	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.3	0.4	0.4	3.2	7.3	7.3	47.8	0.0	41.3	42.9	0.0	47.6
LnGrp LOS	A	A	A	A	A	A	D	A	D	D	A	D
Approach Vol, veh/h	586			1289			67			152		
Approach Delay, s/veh	0.6			7.2			43.2			46.8		
Approach LOS	A			A			D			D		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.0	76.2		15.8	7.8	76.4		15.8				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.7	60.3		20.5	6.5	59.5		20.5				
Max Q Clear Time (g_c+I1), s	2.6	2.0		9.6	2.6	16.8		11.2				
Green Ext Time (p_c), s	0.0	3.2		0.5	0.0	9.7		0.1				
Intersection Summary												
HCM 6th Ctrl Delay	9.4											
HCM 6th LOS	A											

HCM 6th TWSC
3: 20th St & South St

12/23/2021

Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	554	96	0	1299	1	0	0	16	1	0	10
Future Vol, veh/h	3	554	96	0	1299	1	0	0	16	1	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Free	-	-	None	-	-	Yield	-	-	None
Storage Length	200	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	3	602	104	0	1412	1	0	0	17	1	0	11

Major/Minor	Major1		Major2			Minor1			Minor2			
Conflicting Flow All	1413	0	-	-	-	0	-	-	301	1720	2021	707
Stage 1	-	-	-	-	-	-	-	-	-	1413	1413	-
Stage 2	-	-	-	-	-	-	-	-	-	307	608	-
Critical Hdwy	4.16	-	-	-	-	-	-	-	6.96	7.56	6.56	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	6.56	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	6.56	5.56	-
Follow-up Hdwy	2.23	-	-	-	-	-	-	-	3.33	3.53	4.03	3.33
Pot Cap-1 Maneuver	473	-	0	0	-	-	0	0	692	57	57	375
Stage 1	-	-	0	0	-	-	0	0	-	144	201	-
Stage 2	-	-	0	0	-	-	0	0	-	675	482	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	473	-	-	-	-	-	-	-	692	55	57	375
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	55	57	-
Stage 1	-	-	-	-	-	-	-	-	-	143	201	-
Stage 2	-	-	-	-	-	-	-	-	-	654	479	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	10.3	20.4
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	692	473	-	-	-	245
HCM Lane V/C Ratio	0.025	0.007	-	-	-	0.049
HCM Control Delay (s)	10.3	12.7	-	-	-	20.4
HCM Lane LOS	B	B	-	-	-	C
HCM 95th %tile Q(veh)	0.1	0	-	-	-	0.2

HCM 6th TWSC
11: 15th St & South St

12/23/2021

Intersection												
Int Delay, s/veh	2.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	549	19	21	1122	12	67	0	23	0	0	2
Future Vol, veh/h	1	549	19	21	1122	12	67	0	23	0	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	-	200	-	-	100	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	1	597	21	23	1220	13	73	0	25	0	0	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1233	0	0	618	0	0	1266	1889	309	1574	1893	617
Stage 1	-	-	-	-	-	-	610	610	-	1273	1273	-
Stage 2	-	-	-	-	-	-	656	1279	-	301	620	-
Critical Hdwy	4.16	-	-	4.16	-	-	7.56	6.56	6.96	7.56	6.56	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-	6.56	5.56	-	6.56	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.56	5.56	-	6.56	5.56	-
Follow-up Hdwy	2.23	-	-	2.23	-	-	3.53	4.03	3.33	3.53	4.03	3.33
Pot Cap-1 Maneuver	555	-	-	951	-	-	125	69	684	73	68	430
Stage 1	-	-	-	-	-	-	446	481	-	176	235	-
Stage 2	-	-	-	-	-	-	418	233	-	681	476	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	555	-	-	951	-	-	122	67	684	69	66	430
Mov Cap-2 Maneuver	-	-	-	-	-	-	122	67	-	69	66	-
Stage 1	-	-	-	-	-	-	445	480	-	176	229	-
Stage 2	-	-	-	-	-	-	406	227	-	655	475	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.2			55.5			13.4		
HCM LOS							F			B		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	122	684	555	-	-	951	-	-	430
HCM Lane V/C Ratio	0.597	0.037	0.002	-	-	0.024	-	-	0.005
HCM Control Delay (s)	70.9	10.5	11.5	-	-	8.9	-	-	13.4
HCM Lane LOS	F	B	B	-	-	A	-	-	B
HCM 95th %tile Q(veh)	3	0.1	0	-	-	0.1	-	-	0

Intersection												
Int Delay, s/veh	9.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	181	40	16	464	4	158	27	18	4	2	5
Future Vol, veh/h	17	181	40	16	464	4	158	27	18	4	2	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	18	197	43	17	504	4	172	29	20	4	2	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	508	0	0	240	0	0	799	797	219	819	816	506
Stage 1	-	-	-	-	-	-	255	255	-	540	540	-
Stage 2	-	-	-	-	-	-	544	542	-	279	276	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1052	-	-	1321	-	-	302	318	818	293	310	564
Stage 1	-	-	-	-	-	-	747	695	-	524	520	-
Stage 2	-	-	-	-	-	-	521	519	-	725	680	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1052	-	-	1321	-	-	289	306	818	258	298	564
Mov Cap-2 Maneuver	-	-	-	-	-	-	289	306	-	258	298	-
Stage 1	-	-	-	-	-	-	732	681	-	514	511	-
Stage 2	-	-	-	-	-	-	505	510	-	664	666	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.6			0.3			41.1			15.5		
HCM LOS							E			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	309	1052	-	-	1321	-	-	354				
HCM Lane V/C Ratio	0.714	0.018	-	-	0.013	-	-	0.034				
HCM Control Delay (s)	41.1	8.5	0	-	7.8	0	-	15.5				
HCM Lane LOS	E	A	A	-	A	A	-	C				
HCM 95th %tile Q(veh)	5.1	0.1	-	-	0	-	-	0.1				

Intersection												
Int Delay, s/veh	3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	33	160	7	1	401	23	28	13	3	21	2	59
Future Vol, veh/h	33	160	7	1	401	23	28	13	3	21	2	59
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	36	174	8	1	436	25	30	14	3	23	2	64
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	461	0	0	182	0	0	734	713	178	710	705	449
Stage 1	-	-	-	-	-	-	250	250	-	451	451	-
Stage 2	-	-	-	-	-	-	484	463	-	259	254	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1095	-	-	1387	-	-	334	356	862	347	360	608
Stage 1	-	-	-	-	-	-	752	698	-	586	569	-
Stage 2	-	-	-	-	-	-	562	562	-	744	695	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1095	-	-	1387	-	-	289	342	862	325	346	608
Mov Cap-2 Maneuver	-	-	-	-	-	-	289	342	-	325	346	-
Stage 1	-	-	-	-	-	-	724	672	-	564	568	-
Stage 2	-	-	-	-	-	-	500	561	-	699	669	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.4			0			18.3			14		
HCM LOS							C			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	318	1095	-	-	1387	-	-	490				
HCM Lane V/C Ratio	0.15	0.033	-	-	0.001	-	-	0.182				
HCM Control Delay (s)	18.3	8.4	0	-	7.6	0	-	14				
HCM Lane LOS	C	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.5	0.1	-	-	0	-	-	0.7				

HCM 6th Signalized Intersection Summary

14: 3rd St & South St

12/23/2021

														
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		
Lane Configurations														
Traffic Volume (veh/h)	219	894	143	50	528	200	86	81	58	245	108	189		
Future Volume (veh/h)	219	894	143	50	528	200	86	81	58	245	108	189		
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Work Zone On Approach	No			No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870		
Adj Flow Rate, veh/h	238	972	0	54	574	0	93	88	0	266	117	0		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2		
Cap, veh/h	509	1727		310	1530		160	368		340	885			
Arrive On Green	0.09	0.49	0.00	0.04	0.43	0.00	0.05	0.20	0.00	0.10	0.25	0.00		
Sat Flow, veh/h	1781	3647	0	1781	3647	0	3456	1870	1585	3456	3554	1585		
Grp Volume(v), veh/h	238	972	0	54	574	0	93	88	0	266	117	0		
Grp Sat Flow(s),veh/h/ln	1781	1777	0	1781	1777	0	1728	1870	1585	1728	1777	1585		
Q Serve(g_s), s	7.0	19.4	0.0	1.7	11.0	0.0	2.6	4.0	0.0	7.5	2.6	0.0		
Cycle Q Clear(g_c), s	7.0	19.4	0.0	1.7	11.0	0.0	2.6	4.0	0.0	7.5	2.6	0.0		
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00		
Lane Grp Cap(c), veh/h	509	1727		310	1530		160	368		340	885			
V/C Ratio(X)	0.47	0.56		0.17	0.38		0.58	0.24		0.78	0.13			
Avail Cap(c_a), veh/h	660	1727		357	1530		238	368		467	885			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	0.00	0.84	0.84	0.00	1.00	1.00	0.00	1.00	1.00	0.00		
Uniform Delay (d), s/veh	13.1	18.2	0.0	15.6	19.3	0.0	46.7	33.9	0.0	44.0	29.2	0.0		
Incr Delay (d2), s/veh	0.7	1.3	0.0	0.2	0.6	0.0	3.3	1.5	0.0	5.8	0.3	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	7.5	0.0	0.6	4.3	0.0	1.2	1.9	0.0	3.4	1.1	0.0		
Unsig. Movement Delay, s/veh														
LnGrp Delay(d),s/veh	13.8	19.5	0.0	15.8	19.9	0.0	50.1	35.4	0.0	49.9	29.5	0.0		
LnGrp LOS	B	B		B	B		D	D		D	C			
Approach Vol, veh/h	1210		A	628		A	181		A	383		A		
Approach Delay, s/veh	18.4			19.6			42.9			43.6				
Approach LOS	B			B			D			D				
Timer - Assigned Phs	1	2	3	4	5	6	7	8						
Phs Duration (G+Y+Rc), s	8.4	53.1	9.1	29.4	13.9	47.5	14.3	24.2						
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5						
Max Green Setting (Gmax), s	6.5	43.7	6.9	24.9	17.9	32.3	13.5	18.3						
Max Q Clear Time (g_c+l1), s	3.7	21.4	4.6	4.6	9.0	13.0	9.5	6.0						
Green Ext Time (p_c), s	0.0	6.6	0.0	0.6	0.4	3.4	0.3	0.3						

Intersection Summary

HCM 6th Ctrl Delay 24.6

HCM 6th LOS C

Notes

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

HCM 6th Signalized Intersection Summary

17: 6th St & South St

12/23/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	858	274	12	553	4	171	10	28	15	12	21
Future Volume (veh/h)	14	858	274	12	553	4	171	10	28	15	12	21
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	15	933	0	13	601	4	186	11	30	16	13	23
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	569	1377		514	1367	9	285	325	275	303	105	186
Arrive On Green	1.00	1.00	0.00	0.74	0.74	0.74	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	815	1870	1585	600	1856	12	1372	1870	1585	1366	606	1072
Grp Volume(v), veh/h	15	933	0	13	0	605	186	11	30	16	0	36
Grp Sat Flow(s),veh/h/ln	815	1870	1585	600	0	1868	1372	1870	1585	1366	0	1677
Q Serve(g_s), s	0.3	0.0	0.0	0.6	0.0	12.6	13.2	0.5	1.6	1.0	0.0	1.8
Cycle Q Clear(g_c), s	13.0	0.0	0.0	0.6	0.0	12.6	15.1	0.5	1.6	1.5	0.0	1.8
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	1.00		0.64
Lane Grp Cap(c), veh/h	569	1377		514	0	1376	285	325	275	303	0	291
V/C Ratio(X)	0.03	0.68		0.03	0.00	0.44	0.65	0.03	0.11	0.05	0.00	0.12
Avail Cap(c_a), veh/h	569	1377		514	0	1376	356	421	357	373	0	377
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.69	0.69	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	1.1	0.0	0.0	3.6	0.0	5.1	41.2	34.3	34.8	35.0	0.0	34.9
Incr Delay (d2), s/veh	0.1	1.9	0.0	0.0	0.0	0.2	2.9	0.0	0.2	0.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.7	0.0	0.1	0.0	3.5	4.7	0.2	0.6	0.3	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	1.2	1.9	0.0	3.6	0.0	5.4	44.2	34.4	35.0	35.0	0.0	35.1
LnGrp LOS	A	A		A	A	A	D	C	C	D	A	D
Approach Vol, veh/h	948		A	618			227			52		
Approach Delay, s/veh	1.9			5.3			42.5			35.1		
Approach LOS	A			A			D			D		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	78.1			21.9			78.1			21.9		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	68.5			22.5			68.5			22.5		
Max Q Clear Time (g_c+I1), s	15.0			3.8			14.6			17.1		
Green Ext Time (p_c), s	8.5			0.1			4.3			0.3		

Intersection Summary

HCM 6th Ctrl Delay	9.0
HCM 6th LOS	A

Notes

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

HCM 6th Signalized Intersection Summary

7: 19th St & South St

12/23/2021

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑	↘	↗
Traffic Volume (veh/h)	1048	150	220	682	405	148
Future Volume (veh/h)	1048	150	220	682	405	148
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1139	0	239	741	440	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2125		409	2555	660	
Arrive On Green	0.60	0.00	0.15	1.00	0.19	0.00
Sat Flow, veh/h	3741	0	1781	3647	3456	1585
Grp Volume(v), veh/h	1139	0	239	741	440	0
Grp Sat Flow(s),veh/h/ln	1777	0	1781	1777	1728	1585
Q Serve(g_s), s	19.0	0.0	5.1	0.0	11.8	0.0
Cycle Q Clear(g_c), s	19.0	0.0	5.1	0.0	11.8	0.0
Prop In Lane		0.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2125		409	2555	660	
V/C Ratio(X)	0.54		0.58	0.29	0.67	
Avail Cap(c_a), veh/h	2125		589	2555	660	
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.89	0.89	1.00	0.00
Uniform Delay (d), s/veh	11.9	0.0	8.6	0.0	37.5	0.0
Incr Delay (d2), s/veh	1.0	0.0	1.2	0.3	5.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.7	0.0	1.4	0.1	5.4	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.9	0.0	9.8	0.3	42.8	0.0
LnGrp LOS	B		A	A	D	
Approach Vol, veh/h	1139	A		980	440	A
Approach Delay, s/veh	12.9			2.6	42.8	
Approach LOS	B			A	D	
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	12.1	64.3		23.6		76.4
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s	17.7	49.7		19.1		71.9
Max Q Clear Time (g_c+I1), s	7.1	21.0		13.8		2.0
Green Ext Time (p_c), s	0.5	8.8		0.8		5.4
Intersection Summary						
HCM 6th Ctrl Delay			14.1			
HCM 6th LOS			B			

Notes

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

HCM 6th Signalized Intersection Summary

8: 17th St & South St

12/23/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	138	1027	20	107	795	31	24	34	174	58	32	112
Future Volume (veh/h)	138	1027	20	107	795	31	24	34	174	58	32	112
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	150	1116	22	116	864	34	26	37	189	63	35	122
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	447	2110	42	394	2040	80	248	60	306	187	82	287
Arrive On Green	0.07	0.79	0.79	0.05	0.59	0.59	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	1781	3564	70	1781	3485	137	1230	266	1360	1155	366	1275
Grp Volume(v), veh/h	150	556	582	116	440	458	26	0	226	63	0	157
Grp Sat Flow(s),veh/h/ln	1781	1777	1858	1781	1777	1846	1230	0	1626	1155	0	1641
Q Serve(g_s), s	3.3	11.4	11.4	2.6	13.7	13.7	1.9	0.0	12.5	5.2	0.0	8.2
Cycle Q Clear(g_c), s	3.3	11.4	11.4	2.6	13.7	13.7	10.1	0.0	12.5	17.7	0.0	8.2
Prop In Lane	1.00		0.04	1.00		0.07	1.00		0.84	1.00		0.78
Lane Grp Cap(c), veh/h	447	1052	1100	394	1040	1081	248	0	366	187	0	369
V/C Ratio(X)	0.34	0.53	0.53	0.29	0.42	0.42	0.10	0.00	0.62	0.34	0.00	0.43
Avail Cap(c_a), veh/h	573	1052	1100	513	1040	1081	248	0	366	187	0	369
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.72	0.72	0.72	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.1	5.6	5.6	7.9	11.4	11.4	37.5	0.0	34.9	42.9	0.0	33.2
Incr Delay (d2), s/veh	0.3	1.4	1.3	0.4	1.3	1.2	0.8	0.0	7.6	4.8	0.0	3.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	3.1	3.2	0.9	5.0	5.2	0.6	0.0	5.7	1.7	0.0	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.5	6.9	6.9	8.4	12.7	12.6	38.4	0.0	42.5	47.6	0.0	36.8
LnGrp LOS	A	A	A	A	B	B	D	A	D	D	A	D
Approach Vol, veh/h	1288				1014				252		220	
Approach Delay, s/veh	7.1				12.2				42.1		39.9	
Approach LOS	A				B				D		D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.3	63.7		27.0	10.0	63.0		27.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	11.5	52.5		22.5	12.5	51.5		22.5				
Max Q Clear Time (g_c+I1), s	4.6	13.4		19.7	5.3	15.7		14.5				
Green Ext Time (p_c), s	0.1	8.3		0.3	0.2	5.8		0.9				
Intersection Summary												
HCM 6th Ctrl Delay	14.7											
HCM 6th LOS	B											

HCM 6th TWSC
3: 20th St & South St

12/23/2021

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	1123	301	0	1126	1	0	0	79	1	0	7
Future Vol, veh/h	9	1123	301	0	1126	1	0	0	79	1	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Free	-	-	None	-	-	Yield	-	-	None
Storage Length	200	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	1221	327	0	1224	1	0	0	86	1	0	8

Major/Minor	Major1		Major2		Minor1		Minor2	
Conflicting Flow All	1225	0	-	-	-	0	-	-
Stage 1	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-
Critical Hdwy	4.14	-	-	-	-	-	6.94	7.54
Critical Hdwy Stg 1	-	-	-	-	-	-	-	6.54
Critical Hdwy Stg 2	-	-	-	-	-	-	-	6.54
Follow-up Hdwy	2.22	-	-	-	-	-	3.32	3.52
Pot Cap-1 Maneuver	565	-	0	0	-	-	0	437
Stage 1	-	-	0	0	-	-	0	190
Stage 2	-	-	0	0	-	-	0	436
Platoon blocked, %	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	565	-	-	-	-	-	-	437
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	36
Stage 1	-	-	-	-	-	-	-	187
Stage 2	-	-	-	-	-	-	-	344

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	15.2	25.8
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	437	565	-	-	-	182
HCM Lane V/C Ratio	0.196	0.017	-	-	-	0.048
HCM Control Delay (s)	15.2	11.5	-	-	-	25.8
HCM Lane LOS	C	B	-	-	-	D
HCM 95th %tile Q(veh)	0.7	0.1	-	-	-	0.1

HCM 6th TWSC
11: 15th St & South St

12/23/2021

Intersection												
Int Delay, s/veh	19.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	23	1212	120	37	782	48	58	1	29	22	0	35
Future Vol, veh/h	23	1212	120	37	782	48	58	1	29	22	0	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	-	200	-	-	100	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	25	1317	130	40	850	52	63	1	32	24	0	38

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	902	0	0	1447	0	0	1937	2414	724	1665	2453	451
Stage 1	-	-	-	-	-	-	1432	1432	-	956	956	-
Stage 2	-	-	-	-	-	-	505	982	-	709	1497	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	749	-	-	464	-	-	~ 39	32	368	63	30	556
Stage 1	-	-	-	-	-	-	141	198	-	277	335	-
Stage 2	-	-	-	-	-	-	518	325	-	391	184	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	749	-	-	464	-	-	~ 33	28	368	51	27	556
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 33	28	-	51	27	-
Stage 1	-	-	-	-	-	-	136	191	-	268	306	-
Stage 2	-	-	-	-	-	-	441	297	-	344	178	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.6	\$ 460.1	68
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	33	262	749	-	-	464	-	-	115
HCM Lane V/C Ratio	1.91	0.124	0.033	-	-	0.087	-	-	0.539
HCM Control Delay (s)	\$ 687.4	20.7	10	-	-	13.5	-	-	68
HCM Lane LOS	F	C	A	-	-	B	-	-	F
HCM 95th %tile Q(veh)	7.1	0.4	0.1	-	-	0.3	-	-	2.5

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

HCM 6th TWSC
20: Hwy W/Salers Ln & South St

12/23/2021

Intersection												
Int Delay, s/veh	3.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	495	171	13	295	3	92	2	12	2	1	5
Future Vol, veh/h	2	495	171	13	295	3	92	2	12	2	1	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	538	186	14	321	3	100	2	13	2	1	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	324	0	0	724	0	0	989	987	631	994	1079	323
Stage 1	-	-	-	-	-	-	635	635	-	351	351	-
Stage 2	-	-	-	-	-	-	354	352	-	643	728	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1236	-	-	879	-	-	226	247	481	224	218	718
Stage 1	-	-	-	-	-	-	467	472	-	666	632	-
Stage 2	-	-	-	-	-	-	663	632	-	462	429	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1236	-	-	879	-	-	220	242	481	213	213	718
Mov Cap-2 Maneuver	-	-	-	-	-	-	220	242	-	213	213	-
Stage 1	-	-	-	-	-	-	466	471	-	664	620	-
Stage 2	-	-	-	-	-	-	644	620	-	446	428	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.4			34.2			14.7		
HCM LOS							D			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	235	1236	-	-	879	-	-	380				
HCM Lane V/C Ratio	0.49	0.002	-	-	0.016	-	-	0.023				
HCM Control Delay (s)	34.2	7.9	0	-	9.2	0	-	14.7				
HCM Lane LOS	D	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	2.5	0	-	-	0	-	-	0.1				

HCM 6th TWSC
23: Hwy JJ & South St

12/23/2021

Intersection												
Int Delay, s/veh	3.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	80	384	22	3	250	19	14	3	4	41	14	61
Future Vol, veh/h	80	384	22	3	250	19	14	3	4	41	14	61
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	87	417	24	3	272	21	15	3	4	45	15	66
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	293	0	0	441	0	0	932	902	429	896	904	283
Stage 1	-	-	-	-	-	-	603	603	-	289	289	-
Stage 2	-	-	-	-	-	-	329	299	-	607	615	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1269	-	-	1119	-	-	247	277	626	261	277	756
Stage 1	-	-	-	-	-	-	486	488	-	719	673	-
Stage 2	-	-	-	-	-	-	684	666	-	483	482	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1269	-	-	1119	-	-	200	251	626	238	251	756
Mov Cap-2 Maneuver	-	-	-	-	-	-	200	251	-	238	251	-
Stage 1	-	-	-	-	-	-	442	444	-	654	671	-
Stage 2	-	-	-	-	-	-	608	664	-	433	438	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.3			0.1			21.7			19.3		
HCM LOS							C			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	238	1269	-	-	1119	-	-	376				
HCM Lane V/C Ratio	0.096	0.069	-	-	0.003	-	-	0.335				
HCM Control Delay (s)	21.7	8	0	-	8.2	0	-	19.3				
HCM Lane LOS	C	A	A	-	A	A	-	C				
HCM 95th %tile Q(veh)	0.3	0.2	-	-	0	-	-	1.4				

HCM 6th Signalized Intersection Summary

14: 3rd St & South St

12/23/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	197	490	68	20	608	192	75	47	33	160	48	195
Future Volume (veh/h)	197	490	68	20	608	192	75	47	33	160	48	195
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	214	533	0	22	661	0	82	51	0	174	52	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	402	1362		387	1079		199	492		261	997	
Arrive On Green	0.10	0.38	0.00	0.02	0.30	0.00	0.06	0.26	0.00	0.07	0.28	0.00
Sat Flow, veh/h	1795	3676	0	1795	3676	0	3483	1885	1598	3483	3582	1598
Grp Volume(v), veh/h	214	533	0	22	661	0	82	51	0	174	52	0
Grp Sat Flow(s),veh/h/ln	1795	1791	0	1795	1791	0	1742	1885	1598	1742	1791	1598
Q Serve(g_s), s	5.3	7.5	0.0	0.6	11.0	0.0	1.6	1.4	0.0	3.4	0.7	0.0
Cycle Q Clear(g_c), s	5.3	7.5	0.0	0.6	11.0	0.0	1.6	1.4	0.0	3.4	0.7	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	402	1362		387	1079		199	492		261	997	
V/C Ratio(X)	0.53	0.39		0.06	0.61		0.41	0.10		0.67	0.05	
Avail Cap(c_a), veh/h	409	1362		472	1079		256	492		276	997	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	14.3	15.7	0.0	16.0	20.8	0.0	31.6	19.5	0.0	31.3	18.3	0.0
Incr Delay (d2), s/veh	1.3	0.8	0.0	0.1	2.6	0.0	1.4	0.4	0.0	5.6	0.1	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	1.9	2.8	0.0	0.2	4.4	0.0	0.7	0.6	0.0	1.6	0.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.6	16.5	0.0	16.1	23.4	0.0	32.9	19.9	0.0	36.9	18.4	0.0
LnGrp LOS	B	B		B	C		C	B		D	B	
Approach Vol, veh/h		747	A		683	A		133	A		226	A
Approach Delay, s/veh		16.2			23.2			27.9			32.6	
Approach LOS		B			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.2	30.9	8.5	23.8	11.7	25.4	9.7	22.6				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.0	23.4	5.1	18.5	7.5	20.9	5.5	18.1				
Max Q Clear Time (g_c+I1), s	2.6	9.5	3.6	2.7	7.3	13.0	5.4	3.4				
Green Ext Time (p_c), s	0.0	2.7	0.0	0.2	0.0	2.5	0.0	0.1				
Intersection Summary												
HCM 6th Ctrl Delay			21.8									
HCM 6th LOS			C									
Notes												
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary

17: 6th St & South St

12/23/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	476	135	10	612	10	176	10	17	11	6	9
Future Volume (veh/h)	18	476	135	10	612	10	176	10	17	11	6	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	20	517	0	11	665	11	191	11	18	12	7	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	538	1420		654	1393	23	286	310	263	288	116	165
Arrive On Green	0.75	0.75	0.00	0.75	0.75	0.75	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	769	1885	1598	891	1849	31	1407	1885	1598	1392	702	1003
Grp Volume(v), veh/h	20	517	0	11	0	676	191	11	18	12	0	17
Grp Sat Flow(s),veh/h/ln	769	1885	1598	891	0	1880	1407	1885	1598	1392	0	1705
Q Serve(g_s), s	1.1	10.2	0.0	0.5	0.0	15.2	14.5	0.5	1.0	0.8	0.0	0.9
Cycle Q Clear(g_c), s	16.3	10.2	0.0	10.7	0.0	15.2	15.4	0.5	1.0	1.3	0.0	0.9
Prop In Lane	1.00		1.00	1.00		0.02	1.00		1.00	1.00		0.59
Lane Grp Cap(c), veh/h	538	1420		654	0	1416	286	310	263	288	0	281
V/C Ratio(X)	0.04	0.36		0.02	0.00	0.48	0.67	0.04	0.07	0.04	0.00	0.06
Avail Cap(c_a), veh/h	538	1420		654	0	1416	548	663	562	548	0	599
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.4	4.6	0.0	6.4	0.0	5.2	45.1	38.4	38.7	39.0	0.0	38.6
Incr Delay (d2), s/veh	0.1	0.7	0.0	0.0	0.0	0.3	2.7	0.0	0.1	0.1	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	3.1	0.0	0.1	0.0	4.3	5.2	0.3	0.4	0.3	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.5	5.3	0.0	6.4	0.0	5.5	47.8	38.5	38.8	39.1	0.0	38.7
LnGrp LOS	A	A		A	A	A	D	D	D	D	A	D
Approach Vol, veh/h		537	A		687			220			29	
Approach Delay, s/veh		5.4			5.5			46.6			38.8	
Approach LOS		A			A			D			D	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		87.0		22.5		87.0		22.5				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		82.5		38.5		82.5		38.5				
Max Q Clear Time (g_c+I1), s		18.3		3.3		17.2		17.4				
Green Ext Time (p_c), s		3.5		0.1		4.9		0.6				

Intersection Summary

HCM 6th Ctrl Delay 12.3

HCM 6th LOS B

Notes

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

HCM 6th Signalized Intersection Summary

7: 19th St & South St

12/23/2021

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑↑	↵↵	↵
Traffic Volume (veh/h)	571	217	267	651	428	147
Future Volume (veh/h)	571	217	267	651	428	147
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	621	0	290	708	465	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1	1	1	1
Cap, veh/h	1168		513	1922	1076	
Arrive On Green	0.33	0.00	0.13	0.54	0.31	0.00
Sat Flow, veh/h	3770	0	1795	3676	3483	1598
Grp Volume(v), veh/h	621	0	290	708	465	0
Grp Sat Flow(s),veh/h/ln	1791	0	1795	1791	1742	1598
Q Serve(g_s), s	8.2	0.0	5.7	6.7	6.2	0.0
Cycle Q Clear(g_c), s	8.2	0.0	5.7	6.7	6.2	0.0
Prop In Lane		0.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1168		513	1922	1076	
V/C Ratio(X)	0.53		0.57	0.37	0.43	
Avail Cap(c_a), veh/h	1168		566	2028	1076	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	16.0	0.0	10.3	7.8	16.1	0.0
Incr Delay (d2), s/veh	1.7	0.0	1.1	0.1	1.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	0.0	1.7	1.8	2.4	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	17.7	0.0	11.4	7.9	17.3	0.0
LnGrp LOS	B		B	A	B	
Approach Vol, veh/h	621	A		998	465	A
Approach Delay, s/veh	17.7			8.9	17.3	
Approach LOS	B			A	B	
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	12.3	23.5		22.5		35.8
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s	9.5	19.0		18.0		33.0
Max Q Clear Time (g_c+l1), s	7.7	10.2		8.2		8.7
Green Ext Time (p_c), s	0.2	2.5		1.3		4.6
Intersection Summary						
HCM 6th Ctrl Delay			13.4			
HCM 6th LOS			B			

Notes

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

HCM 6th Signalized Intersection Summary

8: 17th St & South St

12/23/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	91	609	16	185	783	30	22	25	207	30	32	118
Future Volume (veh/h)	91	609	16	185	783	30	22	25	207	30	32	118
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	99	662	17	201	851	33	24	27	225	33	35	128
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	368	1255	32	464	1354	53	417	54	453	336	111	406
Arrive On Green	0.07	0.35	0.35	0.10	0.39	0.39	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	1795	3568	92	1795	3515	136	1233	174	1450	1137	355	1297
Grp Volume(v), veh/h	99	332	347	201	434	450	24	0	252	33	0	163
Grp Sat Flow(s),veh/h/ln	1795	1791	1869	1795	1791	1861	1233	0	1624	1137	0	1652
Q Serve(g_s), s	2.0	8.5	8.6	4.0	11.4	11.4	0.9	0.0	7.3	1.4	0.0	4.4
Cycle Q Clear(g_c), s	2.0	8.5	8.6	4.0	11.4	11.4	5.2	0.0	7.3	8.7	0.0	4.4
Prop In Lane	1.00		0.05	1.00		0.07	1.00		0.89	1.00		0.79
Lane Grp Cap(c), veh/h	368	630	657	464	690	717	417	0	508	336	0	516
V/C Ratio(X)	0.27	0.53	0.53	0.43	0.63	0.63	0.06	0.00	0.50	0.10	0.00	0.32
Avail Cap(c_a), veh/h	433	630	657	582	690	717	417	0	508	336	0	516
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.2	14.9	14.9	10.6	14.4	14.4	17.2	0.0	16.2	19.7	0.0	15.2
Incr Delay (d2), s/veh	0.4	3.1	3.0	0.6	4.3	4.1	0.3	0.0	3.4	0.6	0.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	3.4	3.5	1.3	4.4	4.6	0.3	0.0	2.9	0.4	0.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.6	18.1	17.9	11.2	18.7	18.6	17.4	0.0	19.6	20.3	0.0	16.8
LnGrp LOS	B	B	B	B	B	B	B	A	B	C	A	B
Approach Vol, veh/h	778			1085			276			196		
Approach Delay, s/veh	17.2			17.3			19.4			17.4		
Approach LOS	B			B			B			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.4	24.9		22.6	8.5	26.8		22.6				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	9.7	18.7		18.1	6.1	22.3		18.1				
Max Q Clear Time (g_c+I1), s	6.0	10.6		10.7	4.0	13.4		9.3				
Green Ext Time (p_c), s	0.2	2.4		0.6	0.0	3.4		1.0				
Intersection Summary												
HCM 6th Ctrl Delay	17.5											
HCM 6th LOS	B											

HCM 6th TWSC
3: 20th St & South St

12/23/2021

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	675	346	0	1072	4	0	0	90	1	0	6
Future Vol, veh/h	1	675	346	0	1072	4	0	0	90	1	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Free	-	-	None	-	-	Yield	-	-	None
Storage Length	200	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	1	734	376	0	1165	4	0	0	98	1	0	7

Major/Minor	Major1		Major2		Minor1		Minor2	
Conflicting Flow All	1169	0	-	-	-	0	-	-
Stage 1	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-
Critical Hdwy	4.12	-	-	-	-	-	6.92	7.52
Critical Hdwy Stg 1	-	-	-	-	-	-	-	6.52
Critical Hdwy Stg 2	-	-	-	-	-	-	-	6.52
Follow-up Hdwy	2.21	-	-	-	-	-	3.31	3.51
Pot Cap-1 Maneuver	599	-	0	0	-	-	0	0
Stage 1	-	-	0	0	-	-	0	0
Stage 2	-	-	0	0	-	-	0	0
Platoon blocked, %	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	599	-	-	-	-	-	-	633
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	68
Stage 1	-	-	-	-	-	-	-	207
Stage 2	-	-	-	-	-	-	-	528

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	11.7	19.8
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	633	599	-	-	-	251
HCM Lane V/C Ratio	0.155	0.002	-	-	-	0.03
HCM Control Delay (s)	11.7	11	-	-	-	19.8
HCM Lane LOS	B	B	-	-	-	C
HCM 95th %tile Q(veh)	0.5	0	-	-	-	0.1

Intersection												
Int Delay, s/veh	4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	35	738	61	16	884	47	50	1	27	15	0	32
Future Vol, veh/h	35	738	61	16	884	47	50	1	27	15	0	32
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	-	200	-	-	100	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	38	802	66	17	961	51	54	1	29	16	0	35

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1012	0	0	868	0	0	1426	1957	434	1499	1965	506
Stage 1	-	-	-	-	-	-	911	911	-	1021	1021	-
Stage 2	-	-	-	-	-	-	515	1046	-	478	944	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.52	6.52	6.92	7.52	6.52	6.92
Critical Hdwy Stg 1	-	-	-	-	-	-	6.52	5.52	-	6.52	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.52	5.52	-	6.52	5.52	-
Follow-up Hdwy	2.21	-	-	2.21	-	-	3.51	4.01	3.31	3.51	4.01	3.31
Pot Cap-1 Maneuver	687	-	-	778	-	-	97	64	573	85	63	514
Stage 1	-	-	-	-	-	-	297	353	-	255	314	-
Stage 2	-	-	-	-	-	-	513	306	-	540	341	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	687	-	-	778	-	-	85	59	573	75	58	514
Mov Cap-2 Maneuver	-	-	-	-	-	-	85	59	-	75	58	-
Stage 1	-	-	-	-	-	-	281	334	-	241	307	-
Stage 2	-	-	-	-	-	-	468	299	-	482	322	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.4			0.2			71.1			33		
HCM LOS							F			D		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	85	437	687	-	-	778	-	-	179
HCM Lane V/C Ratio	0.639	0.07	0.055	-	-	0.022	-	-	0.285
HCM Control Delay (s)	103.2	13.9	10.5	-	-	9.7	-	-	33
HCM Lane LOS	F	B	B	-	-	A	-	-	D
HCM 95th %tile Q(veh)	3	0.2	0.2	-	-	0.1	-	-	1.1

HCM 6th TWSC
20: Hwy W/Salers Ln & South St

12/23/2021

Intersection												
Int Delay, s/veh	2.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	294	79	5	360	11	93	1	15	2	1	3
Future Vol, veh/h	3	294	79	5	360	11	93	1	15	2	1	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	3	320	86	5	391	12	101	1	16	2	1	3
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	403	0	0	406	0	0	778	782	363	785	819	397
Stage 1	-	-	-	-	-	-	369	369	-	407	407	-
Stage 2	-	-	-	-	-	-	409	413	-	378	412	-
Critical Hdwy	4.11	-	-	4.11	-	-	7.11	6.51	6.21	7.11	6.51	6.21
Critical Hdwy Stg 1	-	-	-	-	-	-	6.11	5.51	-	6.11	5.51	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.11	5.51	-	6.11	5.51	-
Follow-up Hdwy	2.209	-	-	2.209	-	-	3.509	4.009	3.309	3.509	4.009	3.309
Pot Cap-1 Maneuver	1161	-	-	1158	-	-	315	327	684	311	311	655
Stage 1	-	-	-	-	-	-	653	623	-	623	599	-
Stage 2	-	-	-	-	-	-	621	595	-	646	596	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1161	-	-	1158	-	-	311	324	684	301	308	655
Mov Cap-2 Maneuver	-	-	-	-	-	-	311	324	-	301	308	-
Stage 1	-	-	-	-	-	-	651	621	-	621	595	-
Stage 2	-	-	-	-	-	-	613	591	-	628	594	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.1			21.4			13.8		
HCM LOS							C			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	336	1161	-	-	1158	-	-	415				
HCM Lane V/C Ratio	0.353	0.003	-	-	0.005	-	-	0.016				
HCM Control Delay (s)	21.4	8.1	0	-	8.1	0	-	13.8				
HCM Lane LOS	C	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	1.5	0	-	-	0	-	-	0				

Intersection												
Int Delay, s/veh	2.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	42	247	17	1	288	3	17	4	2	9	1	59
Future Vol, veh/h	42	247	17	1	288	3	17	4	2	9	1	59
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	46	268	18	1	313	3	18	4	2	10	1	64
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	316	0	0	286	0	0	718	687	277	689	695	315
Stage 1	-	-	-	-	-	-	369	369	-	317	317	-
Stage 2	-	-	-	-	-	-	349	318	-	372	378	-
Critical Hdwy	4.11	-	-	4.11	-	-	7.11	6.51	6.21	7.11	6.51	6.21
Critical Hdwy Stg 1	-	-	-	-	-	-	6.11	5.51	-	6.11	5.51	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.11	5.51	-	6.11	5.51	-
Follow-up Hdwy	2.209	-	-	2.209	-	-	3.509	4.009	3.309	3.509	4.009	3.309
Pot Cap-1 Maneuver	1250	-	-	1282	-	-	345	371	764	361	367	728
Stage 1	-	-	-	-	-	-	653	623	-	696	656	-
Stage 2	-	-	-	-	-	-	669	655	-	651	617	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1250	-	-	1282	-	-	303	354	764	344	350	728
Mov Cap-2 Maneuver	-	-	-	-	-	-	303	354	-	344	350	-
Stage 1	-	-	-	-	-	-	624	596	-	665	655	-
Stage 2	-	-	-	-	-	-	608	654	-	616	590	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.1			0			16.9			11.5		
HCM LOS							C			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	328	1250	-	-	1282	-	-	627				
HCM Lane V/C Ratio	0.076	0.037	-	-	0.001	-	-	0.12				
HCM Control Delay (s)	16.9	8	0	-	7.8	0	-	11.5				
HCM Lane LOS	C	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.2	0.1	-	-	0	-	-	0.4				

HCM 6th Signalized Intersection Summary

14: 3rd St & South St

12/23/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	436	69	35	1096	282	229	142	65	164	78	189
Future Volume (veh/h)	130	436	69	35	1096	282	229	142	65	164	78	189
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	141	474	0	38	1191	0	249	154	0	178	85	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	263	1651		492	1547		320	419		247	721	
Arrive On Green	0.06	0.47	0.00	0.03	0.44	0.00	0.09	0.23	0.00	0.07	0.20	0.00
Sat Flow, veh/h	1767	3618	0	1767	3618	0	3428	1856	1572	3428	3526	1572
Grp Volume(v), veh/h	141	474	0	38	1191	0	249	154	0	178	85	0
Grp Sat Flow(s),veh/h/ln	1767	1763	0	1767	1763	0	1714	1856	1572	1714	1763	1572
Q Serve(g_s), s	3.9	7.4	0.0	1.0	25.8	0.0	6.4	6.3	0.0	4.6	1.8	0.0
Cycle Q Clear(g_c), s	3.9	7.4	0.0	1.0	25.8	0.0	6.4	6.3	0.0	4.6	1.8	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	263	1651		492	1547		320	419		247	721	
V/C Ratio(X)	0.54	0.29		0.08	0.77		0.78	0.37		0.72	0.12	
Avail Cap(c_a), veh/h	263	1651		530	1547		331	419		248	721	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.09	0.09	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	17.4	14.7	0.0	12.9	21.4	0.0	39.9	29.4	0.0	40.9	29.2	0.0
Incr Delay (d2), s/veh	2.1	0.4	0.0	0.0	0.3	0.0	10.8	2.5	0.0	9.7	0.3	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	1.5	2.8	0.0	0.4	9.5	0.0	3.1	3.0	0.0	2.2	0.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.5	15.1	0.0	12.9	21.7	0.0	50.7	31.9	0.0	50.5	29.5	0.0
LnGrp LOS	B	B		B	C		D	C		D	C	
Approach Vol, veh/h	615		A	1229		A	403		A	263		A
Approach Delay, s/veh	16.1			21.5			43.5			43.7		
Approach LOS	B			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.6	46.6	12.9	22.9	10.2	44.0	11.0	24.8				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.0	40.2	8.7	18.1	5.7	39.5	6.5	20.3				
Max Q Clear Time (g_c+I1), s	3.0	9.4	8.4	3.8	5.9	27.8	6.6	8.3				
Green Ext Time (p_c), s	0.0	3.0	0.0	0.3	0.0	6.0	0.0	0.5				

Intersection Summary

HCM 6th Ctrl Delay 26.0

HCM 6th LOS C

Notes

User approved pedestrian interval to be less than phase max green.

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

HCM 6th Signalized Intersection Summary

17: 6th St & South St

12/23/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	448	143	13	965	20	390	24	18	16	13	34
Future Volume (veh/h)	22	448	143	13	965	20	390	24	18	16	13	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	24	487	0	14	1049	22	424	26	20	17	14	37
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	85	1082		472	1056	22	476	588	498	494	143	377
Arrive On Green	0.58	0.58	0.00	0.58	0.58	0.58	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	523	1856	1572	902	1811	38	1343	1856	1572	1349	451	1191
Grp Volume(v), veh/h	24	487	0	14	0	1071	424	26	20	17	0	51
Grp Sat Flow(s),veh/h/ln	523	1856	1572	902	0	1849	1343	1856	1572	1349	0	1641
Q Serve(g_s), s	0.9	13.3	0.0	0.8	0.0	51.6	26.5	0.9	0.8	0.8	0.0	2.0
Cycle Q Clear(g_c), s	52.5	13.3	0.0	14.1	0.0	51.6	28.5	0.9	0.8	1.7	0.0	2.0
Prop In Lane	1.00		1.00	1.00		0.02	1.00		1.00	1.00		0.73
Lane Grp Cap(c), veh/h	85	1082		472	0	1078	476	588	498	494	0	520
V/C Ratio(X)	0.28	0.45		0.03	0.00	0.99	0.89	0.04	0.04	0.03	0.00	0.10
Avail Cap(c_a), veh/h	85	1082		472	0	1078	476	588	498	494	0	520
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)	0.92	0.92	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	44.9	10.6	0.0	14.6	0.0	18.6	32.6	21.3	21.3	21.9	0.0	21.7
Incr Delay (d2), s/veh	7.5	1.2	0.0	0.0	0.0	25.7	18.6	0.0	0.0	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	4.9	0.0	0.2	0.0	25.2	11.6	0.4	0.3	0.3	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.4	11.8	0.0	14.6	0.0	44.2	51.2	21.3	21.3	21.9	0.0	21.8
LnGrp LOS	D	B		B	A	D	D	C	C	C	A	C
Approach Vol, veh/h	511		A	1085			470			68		
Approach Delay, s/veh	13.7			43.9			48.3			21.8		
Approach LOS	B			D			D			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	57.0			33.0			57.0			33.0		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	52.5			28.5			52.5			28.5		
Max Q Clear Time (g_c+I1), s	54.5			4.0			53.6			30.5		
Green Ext Time (p_c), s	0.0			0.3			0.0			0.0		

Intersection Summary

HCM 6th Ctrl Delay 36.9

HCM 6th LOS D

Notes

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

HCM 6th Signalized Intersection Summary

7: 19th St & South St

12/23/2021

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑↑	↵↵	↵
Traffic Volume (veh/h)	640	133	122	1506	220	61
Future Volume (veh/h)	640	133	122	1506	220	61
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	696	0	133	1637	239	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	2044		529	2409	743	
Arrive On Green	0.58	0.00	0.11	1.00	0.22	0.00
Sat Flow, veh/h	3711	0	1767	3618	3428	1572
Grp Volume(v), veh/h	696	0	133	1637	239	0
Grp Sat Flow(s),veh/h/ln	1763	0	1767	1763	1714	1572
Q Serve(g_s), s	9.3	0.0	2.6	0.0	5.3	0.0
Cycle Q Clear(g_c), s	9.3	0.0	2.6	0.0	5.3	0.0
Prop In Lane		0.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2044		529	2409	743	
V/C Ratio(X)	0.34		0.25	0.68	0.32	
Avail Cap(c_a), veh/h	2044		581	2409	743	
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.62	0.62	1.00	0.00
Uniform Delay (d), s/veh	9.9	0.0	6.3	0.0	29.7	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.2	1.0	1.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	0.0	0.7	0.3	2.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	10.4	0.0	6.4	1.0	30.8	0.0
LnGrp LOS	B		A	A	C	
Approach Vol, veh/h	696	A		1770	239	A
Approach Delay, s/veh	10.4			1.4	30.8	
Approach LOS	B			A	C	
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.3	56.7		24.0		66.0
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s	7.5	49.5		19.5		61.5
Max Q Clear Time (g_c+l1), s	4.6	11.3		7.3		2.0
Green Ext Time (p_c), s	0.1	4.9		0.6		19.0
Intersection Summary						
HCM 6th Ctrl Delay			6.3			
HCM 6th LOS			A			

Notes

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

HCM 6th Signalized Intersection Summary 8: 17th St & South St

12/23/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	663	9	51	1475	16	24	6	54	30	12	131
Future Volume (veh/h)	44	663	9	51	1475	16	24	6	54	30	12	131
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	48	721	10	55	1603	17	26	7	59	33	13	142
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	238	2154	30	589	2172	23	224	34	291	304	27	297
Arrive On Green	0.08	1.00	1.00	0.04	0.61	0.61	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	1767	3560	49	1767	3574	38	1222	170	1429	1325	134	1459
Grp Volume(v), veh/h	48	357	374	55	790	830	26	0	66	33	0	155
Grp Sat Flow(s),veh/h/ln	1767	1763	1847	1767	1763	1849	1222	0	1598	1325	0	1593
Q Serve(g_s), s	0.9	0.0	0.0	1.0	28.7	28.8	1.7	0.0	3.1	1.9	0.0	7.7
Cycle Q Clear(g_c), s	0.9	0.0	0.0	1.0	28.7	28.8	9.5	0.0	3.1	5.0	0.0	7.7
Prop In Lane	1.00		0.03	1.00		0.02	1.00		0.89	1.00		0.92
Lane Grp Cap(c), veh/h	238	1067	1118	589	1071	1124	224	0	325	304	0	324
V/C Ratio(X)	0.20	0.33	0.33	0.09	0.74	0.74	0.12	0.00	0.20	0.11	0.00	0.48
Avail Cap(c_a), veh/h	277	1067	1118	619	1071	1124	224	0	325	304	0	324
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.91	0.91	0.91	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.7	0.0	0.0	5.8	12.5	12.6	35.8	0.0	29.8	31.9	0.0	31.6
Incr Delay (d2), s/veh	0.4	0.8	0.7	0.1	4.5	4.4	1.1	0.0	1.4	0.7	0.0	5.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.2	0.2	0.3	10.3	10.8	0.6	0.0	1.3	0.7	0.0	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.1	0.8	0.7	5.9	17.1	16.9	36.9	0.0	31.2	32.6	0.0	36.6
LnGrp LOS	B	A	A	A	B	B	D	A	C	C	A	D
Approach Vol, veh/h	779				1675				92			
Approach Delay, s/veh	1.4				16.6				32.8			
Approach LOS	A				B				C			
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.2	59.0		22.8	8.0	59.2		22.8				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.3	52.9		18.3	5.5	52.7		18.3				
Max Q Clear Time (g_c+I1), s	3.0	2.0		9.7	2.9	30.8		11.5				
Green Ext Time (p_c), s	0.0	4.5		0.6	0.0	11.6		0.2				
Intersection Summary												
HCM 6th Ctrl Delay	14.2											
HCM 6th LOS	B											

HCM 6th TWSC
3: 20th St & South St

12/23/2021

Intersection												
Int Delay, s/veh	0.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	739	123	0	1715	1	0	0	20	1	0	12
Future Vol, veh/h	4	739	123	0	1715	1	0	0	20	1	0	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Free	-	-	None	-	-	Yield	-	-	None
Storage Length	200	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	4	803	134	0	1864	1	0	0	22	1	0	13

Major/Minor	Major1		Major2		Minor1		Minor2	
Conflicting Flow All	1865	0	-	-	-	0	-	-
Stage 1	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-
Critical Hdwy	4.16	-	-	-	-	-	6.96	7.56
Critical Hdwy Stg 1	-	-	-	-	-	-	-	6.56
Critical Hdwy Stg 2	-	-	-	-	-	-	-	6.56
Follow-up Hdwy	2.23	-	-	-	-	-	3.33	3.53
Pot Cap-1 Maneuver	316	-	0	0	-	-	0	0
Stage 1	-	-	0	0	-	-	0	0
Stage 2	-	-	0	0	-	-	0	0
Platoon blocked, %	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	316	-	-	-	-	-	-	595
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	20
Stage 1	-	-	-	-	-	-	-	73
Stage 2	-	-	-	-	-	-	-	558

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	11.3	34.3
HCM LOS			B	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	595	316	-	-	-	137
HCM Lane V/C Ratio	0.037	0.014	-	-	-	0.103
HCM Control Delay (s)	11.3	16.6	-	-	-	34.3
HCM Lane LOS	B	C	-	-	-	D
HCM 95th %tile Q(veh)	0.1	0	-	-	-	0.3

Intersection												
Int Delay, s/veh	13.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	732	24	26	1464	15	82	0	29	0	0	2
Future Vol, veh/h	1	732	24	26	1464	15	82	0	29	0	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	-	200	-	-	100	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	1	796	26	28	1591	16	89	0	32	0	0	2
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1607	0	0	822	0	0	1663	2474	411	2055	2479	804
Stage 1	-	-	-	-	-	-	811	811	-	1655	1655	-
Stage 2	-	-	-	-	-	-	852	1663	-	400	824	-
Critical Hdwy	4.16	-	-	4.16	-	-	7.56	6.56	6.96	7.56	6.56	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-	6.56	5.56	-	6.56	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.56	5.56	-	6.56	5.56	-
Follow-up Hdwy	2.23	-	-	2.23	-	-	3.53	4.03	3.33	3.53	4.03	3.33
Pot Cap-1 Maneuver	398	-	-	797	-	-	~ 63	29	587	32	29	324
Stage 1	-	-	-	-	-	-	337	388	-	101	152	-
Stage 2	-	-	-	-	-	-	319	151	-	595	383	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	398	-	-	797	-	-	~ 61	28	587	29	28	324
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 61	28	-	29	28	-
Stage 1	-	-	-	-	-	-	336	387	-	101	147	-
Stage 2	-	-	-	-	-	-	306	146	-	562	382	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.2			291.4			16.2		
HCM LOS							F			C		
Minor Lane/Major Mvmt	NBLn1		NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1		
Capacity (veh/h)	61		587	398	-	-	797	-	-	324		
HCM Lane V/C Ratio	1.461		0.054	0.003	-	-	0.035	-	-	0.007		
HCM Control Delay (s)	\$ 390.4		11.5	14.1	-	-	9.7	-	-	16.2		
HCM Lane LOS	F		B	B	-	-	A	-	-	C		
HCM 95th %tile Q(veh)	7.8		0.2	0	-	-	0.1	-	-	0		
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s				+: Computation Not Defined				*: All major volume in platoon		

HCM 6th TWSC
20: Hwy W/Salers Ln & South St

12/23/2021

Intersection												
Int Delay, s/veh	35.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	21	231	49	20	570	5	193	32	22	5	2	6
Future Vol, veh/h	21	231	49	20	570	5	193	32	22	5	2	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	23	251	53	22	620	5	210	35	24	5	2	7
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	625	0	0	304	0	0	995	993	278	1020	1017	623
Stage 1	-	-	-	-	-	-	324	324	-	667	667	-
Stage 2	-	-	-	-	-	-	671	669	-	353	350	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	952	-	-	1251	-	-	223	244	758	214	237	484
Stage 1	-	-	-	-	-	-	686	648	-	447	455	-
Stage 2	-	-	-	-	-	-	444	454	-	662	631	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	952	-	-	1251	-	-	~ 209	231	758	176	224	484
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 209	231	-	176	224	-
Stage 1	-	-	-	-	-	-	666	629	-	434	443	-
Stage 2	-	-	-	-	-	-	424	442	-	588	613	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.6			0.3			164.7			19.6		
HCM LOS							F			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	226	952	-	-	1251	-	-	261				
HCM Lane V/C Ratio	1.188	0.024	-	-	0.017	-	-	0.054				
HCM Control Delay (s)	164.7	8.9	0	-	7.9	0	-	19.6				
HCM Lane LOS	F	A	A	-	A	A	-	C				
HCM 95th %tile Q(veh)	13	0.1	-	-	0.1	-	-	0.2				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s				+: Computation Not Defined				*: All major volume in platoon		

Intersection												
Int Delay, s/veh	3.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	40	207	9	1	495	29	34	16	4	26	2	72
Future Vol, veh/h	40	207	9	1	495	29	34	16	4	26	2	72
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	43	225	10	1	538	32	37	17	4	28	2	78
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	570	0	0	235	0	0	912	888	230	883	877	554
Stage 1	-	-	-	-	-	-	316	316	-	556	556	-
Stage 2	-	-	-	-	-	-	596	572	-	327	321	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	997	-	-	1326	-	-	254	282	807	265	286	530
Stage 1	-	-	-	-	-	-	693	653	-	514	511	-
Stage 2	-	-	-	-	-	-	488	503	-	684	650	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	997	-	-	1326	-	-	207	268	807	241	271	530
Mov Cap-2 Maneuver	-	-	-	-	-	-	207	268	-	241	271	-
Stage 1	-	-	-	-	-	-	658	620	-	488	510	-
Stage 2	-	-	-	-	-	-	414	502	-	628	618	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.4			0			25.2			17.4		
HCM LOS							D			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	236	997	-	-	1326	-	-	398				
HCM Lane V/C Ratio	0.249	0.044	-	-	0.001	-	-	0.273				
HCM Control Delay (s)	25.2	8.8	0	-	7.7	0	-	17.4				
HCM Lane LOS	D	A	A	-	A	A	-	C				
HCM 95th %tile Q(veh)	1	0.1	-	-	0	-	-	1.1				

HCM 6th Signalized Intersection Summary

14: 3rd St & South St

12/23/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	318	1225	214	75	662	251	123	117	84	348	162	326
Future Volume (veh/h)	318	1225	214	75	662	251	123	117	84	348	162	326
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	346	1332	0	82	720	0	134	127	0	378	176	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	481	1716		217	1394		197	322		449	872	
Arrive On Green	0.13	0.48	0.00	0.04	0.39	0.00	0.06	0.17	0.00	0.13	0.25	0.00
Sat Flow, veh/h	1781	3647	0	1781	3647	0	3456	1870	1585	3456	3554	1585
Grp Volume(v), veh/h	346	1332	0	82	720	0	134	127	0	378	176	0
Grp Sat Flow(s),veh/h/ln	1781	1777	0	1781	1777	0	1728	1870	1585	1728	1777	1585
Q Serve(g_s), s	11.5	32.6	0.0	2.9	16.2	0.0	4.0	6.3	0.0	11.2	4.1	0.0
Cycle Q Clear(g_c), s	11.5	32.6	0.0	2.9	16.2	0.0	4.0	6.3	0.0	11.2	4.1	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	481	1716		217	1394		197	322		449	872	
V/C Ratio(X)	0.72	0.78		0.38	0.52		0.68	0.39		0.84	0.20	
Avail Cap(c_a), veh/h	574	1716		226	1394		306	322		536	872	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.70	0.70	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	16.5	22.5	0.0	20.7	24.3	0.0	48.6	38.6	0.0	44.6	31.4	0.0
Incr Delay (d2), s/veh	3.5	3.5	0.0	0.8	1.0	0.0	4.1	3.6	0.0	10.0	0.5	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	4.6	13.1	0.0	1.2	6.6	0.0	1.8	3.2	0.0	5.3	1.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.0	26.0	0.0	21.5	25.3	0.0	52.7	42.2	0.0	54.6	32.0	0.0
LnGrp LOS	B	C		C	C		D	D		D	C	
Approach Vol, veh/h		1678	A		802	A		261	A		554	A
Approach Delay, s/veh		24.7			24.9			47.6			47.4	
Approach LOS		C			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.0	55.2	10.5	30.3	18.6	45.7	18.2	22.6				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.1	47.5	9.3	25.1	19.5	33.1	16.3	18.1				
Max Q Clear Time (g_c+I1), s	4.9	34.6	6.0	6.1	13.5	18.2	13.2	8.3				
Green Ext Time (p_c), s	0.0	7.1	0.1	0.9	0.5	3.9	0.4	0.4				

Intersection Summary

HCM 6th Ctrl Delay 30.4

HCM 6th LOS C

Notes

User approved pedestrian interval to be less than phase max green.

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

HCM 6th Signalized Intersection Summary

17: 6th St & South St

12/23/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	1060	519	23	689	5	233	14	37	19	23	26
Future Volume (veh/h)	17	1060	519	23	689	5	233	14	37	19	23	26
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	18	1152	0	25	749	5	253	15	40	21	25	28
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	421	1309		410	1299	9	324	401	340	349	173	193
Arrive On Green	1.00	1.00	0.00	0.70	0.70	0.70	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	710	1870	1585	488	1856	12	1351	1870	1585	1349	806	902
Grp Volume(v), veh/h	18	1152	0	25	0	754	253	15	40	21	0	53
Grp Sat Flow(s),veh/h/ln	710	1870	1585	488	0	1868	1351	1870	1585	1349	0	1708
Q Serve(g_s), s	0.8	0.0	0.0	1.7	0.0	21.3	19.6	0.7	2.1	1.3	0.0	2.6
Cycle Q Clear(g_c), s	22.1	0.0	0.0	1.7	0.0	21.3	22.3	0.7	2.1	2.0	0.0	2.6
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	1.00		0.53
Lane Grp Cap(c), veh/h	421	1309		410	0	1308	324	401	340	349	0	366
V/C Ratio(X)	0.04	0.88		0.06	0.00	0.58	0.78	0.04	0.12	0.06	0.00	0.14
Avail Cap(c_a), veh/h	421	1309		410	0	1308	324	401	340	349	0	366
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.35	0.35	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	3.2	0.0	0.0	5.0	0.0	7.9	42.5	32.7	33.2	33.5	0.0	33.4
Incr Delay (d2), s/veh	0.1	3.3	0.0	0.1	0.0	0.6	11.6	0.0	0.2	0.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	1.2	0.0	0.1	0.0	6.8	7.5	0.3	0.8	0.4	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	3.3	3.3	0.0	5.0	0.0	8.6	54.1	32.7	33.4	33.5	0.0	33.6
LnGrp LOS	A	A		A	A	A	D	C	C	C	A	C
Approach Vol, veh/h	1170		A	779			308			74		
Approach Delay, s/veh	3.3			8.4			50.3			33.6		
Approach LOS	A			A			D			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	78.0			27.0			78.0			27.0		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	73.5			22.5			73.5			22.5		
Max Q Clear Time (g_c+I1), s	24.1			4.6			23.3			24.3		
Green Ext Time (p_c), s	13.6			0.2			6.2			0.0		

Intersection Summary

HCM 6th Ctrl Delay 12.2

HCM 6th LOS B

Notes

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

HCM 6th Signalized Intersection Summary

7: 19th St & South St

12/23/2021

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑↑	↵↵	↵
Traffic Volume (veh/h)	1454	244	358	890	599	219
Future Volume (veh/h)	1454	244	358	890	599	219
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1580	0	389	967	651	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1709		404	2488	741	
Arrive On Green	0.48	0.00	0.35	1.00	0.21	0.00
Sat Flow, veh/h	3741	0	1781	3647	3456	1585
Grp Volume(v), veh/h	1580	0	389	967	651	0
Grp Sat Flow(s),veh/h/ln	1777	0	1781	1777	1728	1585
Q Serve(g_s), s	43.6	0.0	17.0	0.0	19.1	0.0
Cycle Q Clear(g_c), s	43.6	0.0	17.0	0.0	19.1	0.0
Prop In Lane		0.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1709		404	2488	741	
V/C Ratio(X)	0.92		0.96	0.39	0.88	
Avail Cap(c_a), veh/h	1709		404	2488	741	
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.68	0.68	1.00	0.00
Uniform Delay (d), s/veh	25.5	0.0	23.5	0.0	39.9	0.0
Incr Delay (d2), s/veh	10.0	0.0	28.0	0.3	14.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.8	0.0	6.5	0.1	9.5	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	35.4	0.0	51.5	0.3	54.0	0.0
LnGrp LOS	D		D	A	D	
Approach Vol, veh/h	1580	A		1356	651	A
Approach Delay, s/veh	35.4			15.0	54.0	
Approach LOS	D			B	D	
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	23.0	55.0		27.0		78.0
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s	18.5	50.5		22.5		73.5
Max Q Clear Time (g_c+I1), s	19.0	45.6		21.1		2.0
Green Ext Time (p_c), s	0.0	3.7		0.4		7.8
Intersection Summary						
HCM 6th Ctrl Delay			31.1			
HCM 6th LOS			C			

Notes

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

HCM 6th Signalized Intersection Summary

8: 17th St & South St

12/23/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	168	1456	25	136	1097	37	31	44	224	71	41	137
Future Volume (veh/h)	168	1456	25	136	1097	37	31	44	224	71	41	137
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	183	1583	27	148	1192	40	34	48	243	77	45	149
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	328	1979	34	339	1899	64	262	70	356	178	100	331
Arrive On Green	0.14	1.00	1.00	0.06	0.54	0.54	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1781	3575	61	1781	3508	118	1189	268	1358	1088	381	1262
Grp Volume(v), veh/h	183	786	824	148	603	629	34	0	291	77	0	194
Grp Sat Flow(s),veh/h/ln	1781	1777	1859	1781	1777	1849	1189	0	1626	1088	0	1643
Q Serve(g_s), s	4.9	0.0	0.0	3.8	24.8	24.8	2.6	0.0	16.9	7.2	0.0	10.4
Cycle Q Clear(g_c), s	4.9	0.0	0.0	3.8	24.8	24.8	13.0	0.0	16.9	24.1	0.0	10.4
Prop In Lane	1.00		0.03	1.00		0.06	1.00		0.84	1.00		0.77
Lane Grp Cap(c), veh/h	328	983	1029	339	962	1001	262	0	426	178	0	430
V/C Ratio(X)	0.56	0.80	0.80	0.44	0.63	0.63	0.13	0.00	0.68	0.43	0.00	0.45
Avail Cap(c_a), veh/h	471	983	1029	417	962	1001	262	0	426	178	0	430
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.7	0.0	0.0	9.3	16.7	16.7	37.9	0.0	34.8	45.7	0.0	32.4
Incr Delay (d2), s/veh	0.1	0.7	0.6	0.9	3.1	3.0	1.0	0.0	8.6	7.4	0.0	3.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.2	0.2	1.4	9.8	10.2	0.8	0.0	7.6	2.3	0.0	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.8	0.7	0.6	10.2	19.8	19.7	38.9	0.0	43.4	53.1	0.0	35.8
LnGrp LOS	B	A	A	B	B	B	D	A	D	D	A	D
Approach Vol, veh/h	1793				1380				325		271	
Approach Delay, s/veh	1.9				18.7				43.0		40.7	
Approach LOS	A				B				D		D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.4	62.6		32.0	11.7	61.3		32.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	10.5	53.5		27.5	15.6	48.4		27.5				
Max Q Clear Time (g_c+I1), s	5.8	2.0		26.1	6.9	26.8		18.9				
Green Ext Time (p_c), s	0.1	16.1		0.2	0.3	7.9		1.3				
Intersection Summary												
HCM 6th Ctrl Delay	14.4											
HCM 6th LOS	B											

HCM 6th TWSC
3: 20th St & South St

12/23/2021

Intersection												
Int Delay, s/veh	3.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	1594	385	0	1509	1	0	0	96	9	0	1
Future Vol, veh/h	11	1594	385	0	1509	1	0	0	96	9	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Free	-	-	None	-	-	Yield	-	-	None
Storage Length	200	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	1733	418	0	1640	1	0	0	104	10	0	1

Major/Minor	Major1		Major2		Minor1		Minor2	
Conflicting Flow All	1641	0	-	-	-	0	-	-
Stage 1	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-
Critical Hdwy	4.14	-	-	-	-	-	6.94	7.54
Critical Hdwy Stg 1	-	-	-	-	-	-	-	6.54
Critical Hdwy Stg 2	-	-	-	-	-	-	-	6.54
Follow-up Hdwy	2.22	-	-	-	-	-	3.32	3.52
Pot Cap-1 Maneuver	391	-	0	0	-	-	0	0
Stage 1	-	-	0	0	-	-	0	0
Stage 2	-	-	0	0	-	-	0	0
Platoon blocked, %	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	391	-	-	-	-	-	-	296
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	101
Stage 2	-	-	-	-	-	-	-	191

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	23.6	\$ 804.6
HCM LOS			C	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	296	391	-	-	-	10
HCM Lane V/C Ratio	0.353	0.031	-	-	-	1.087
HCM Control Delay (s)	23.6	14.5	-	-	-	\$ 804.6
HCM Lane LOS	C	B	-	-	-	F
HCM 95th %tile Q(veh)	1.5	0.1	-	-	-	2.1

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

HCM 6th TWSC
11: 15th St & South St

12/23/2021

Intersection												
Int Delay, s/veh	125.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↱		↰	↰↱		↰	↰			↰↱	
Traffic Vol, veh/h	29	1689	147	45	1086	59	71	1	35	27	0	42
Future Vol, veh/h	29	1689	147	45	1086	59	71	1	35	27	0	42
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	-	200	-	-	100	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	32	1836	160	49	1180	64	77	1	38	29	0	46

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1244	0	0	1996	0	0	2668	3322	998	2293	3370	622
Stage 1	-	-	-	-	-	-	1980	1980	-	1310	1310	-
Stage 2	-	-	-	-	-	-	688	1342	-	983	2060	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	555	-	-	284	-	-	~ 11	8	242	~ 21	8	430
Stage 1	-	-	-	-	-	-	~ 63	106	-	168	227	-
Stage 2	-	-	-	-	-	-	403	219	-	267	96	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	555	-	-	284	-	-	~ 8	6	242	~ 13	6	430
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 8	6	-	~ 13	6	-
Stage 1	-	-	-	-	-	-	~ 59	100	-	158	188	-
Stage 2	-	-	-	-	-	-	298	181	-	210	90	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.8	\$ 3199.6	\$ 878.2
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	8	116	555	-	-	284	-	-	32
HCM Lane V/C Ratio	9.647	0.337	0.057	-	-	0.172	-	-	2.344
HCM Control Delay (s)	\$ 4796	51.1	11.9	-	-	20.3	-	-	\$ 878.2
HCM Lane LOS	F	F	B	-	-	C	-	-	F
HCM 95th %tile Q(veh)	11.2	1.3	0.2	-	-	0.6	-	-	8.6

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

HCM 6th TWSC
20: Hwy W/Salers Ln & South St

12/23/2021

Intersection												
Int Delay, s/veh	9.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	617	209	16	374	4	112	2	15	2	1	6
Future Vol, veh/h	2	617	209	16	374	4	112	2	15	2	1	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	671	227	17	407	4	122	2	16	2	1	7
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	411	0	0	898	0	0	1236	1234	785	1241	1345	409
Stage 1	-	-	-	-	-	-	789	789	-	443	443	-
Stage 2	-	-	-	-	-	-	447	445	-	798	902	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1148	-	-	756	-	-	153	177	393	152	151	642
Stage 1	-	-	-	-	-	-	384	402	-	594	576	-
Stage 2	-	-	-	-	-	-	591	575	-	380	356	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1148	-	-	756	-	-	147	171	393	141	146	642
Mov Cap-2 Maneuver	-	-	-	-	-	-	147	171	-	141	146	-
Stage 1	-	-	-	-	-	-	382	400	-	592	559	-
Stage 2	-	-	-	-	-	-	567	558	-	361	355	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.4			99.5			17.6		
HCM LOS							F			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	159	1148	-	-	756	-	-	296				
HCM Lane V/C Ratio	0.882	0.002	-	-	0.023	-	-	0.033				
HCM Control Delay (s)	99.5	8.1	0	-	9.9	0	-	17.6				
HCM Lane LOS	F	A	A	-	A	A	-	C				
HCM 95th %tile Q(veh)	6.2	0	-	-	0.1	-	-	0.1				

Intersection												
Int Delay, s/veh	5.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	97	481	27	4	319	24	17	4	5	50	17	75
Future Vol, veh/h	97	481	27	4	319	24	17	4	5	50	17	75
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	105	523	29	4	347	26	18	4	5	54	18	82
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	373	0	0	552	0	0	1166	1129	538	1120	1130	360
Stage 1	-	-	-	-	-	-	748	748	-	368	368	-
Stage 2	-	-	-	-	-	-	418	381	-	752	762	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1185	-	-	1018	-	-	171	204	543	184	204	684
Stage 1	-	-	-	-	-	-	404	420	-	652	621	-
Stage 2	-	-	-	-	-	-	612	613	-	402	414	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1185	-	-	1018	-	-	125	177	543	161	177	684
Mov Cap-2 Maneuver	-	-	-	-	-	-	125	177	-	161	177	-
Stage 1	-	-	-	-	-	-	352	366	-	569	618	-
Stage 2	-	-	-	-	-	-	520	610	-	343	361	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.3			0.1			33.3			33.6		
HCM LOS							D			D		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	155	1185	-	-	1018	-	-	275				
HCM Lane V/C Ratio	0.182	0.089	-	-	0.004	-	-	0.561				
HCM Control Delay (s)	33.3	8.3	0	-	8.6	0	-	33.6				
HCM Lane LOS	D	A	A	-	A	A	-	D				
HCM 95th %tile Q(veh)	0.6	0.3	-	-	0	-	-	3.2				

HCM 6th Signalized Intersection Summary

14: 3rd St & South St

12/23/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	289	702	116	35	763	243	120	74	52	235	83	327
Future Volume (veh/h)	289	702	116	35	763	243	120	74	52	235	83	327
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	314	763	0	38	829	0	130	80	0	255	90	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	476	2043		436	1779		191	294		326	698	
Arrive On Green	0.10	0.57	0.00	0.03	0.50	0.00	0.05	0.16	0.00	0.09	0.19	0.00
Sat Flow, veh/h	1795	3676	0	1795	3676	0	3483	1885	1598	3483	3582	1598
Grp Volume(v), veh/h	314	763	0	38	829	0	130	80	0	255	90	0
Grp Sat Flow(s),veh/h/ln	1795	1791	0	1795	1791	0	1742	1885	1598	1742	1791	1598
Q Serve(g_s), s	9.7	14.0	0.0	1.2	18.2	0.0	4.4	4.5	0.0	8.6	2.5	0.0
Cycle Q Clear(g_c), s	9.7	14.0	0.0	1.2	18.2	0.0	4.4	4.5	0.0	8.6	2.5	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	476	2043		436	1779		191	294		326	698	
V/C Ratio(X)	0.66	0.37		0.09	0.47		0.68	0.27		0.78	0.13	
Avail Cap(c_a), veh/h	642	2043		458	1779		493	294		641	698	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.58	0.58	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	13.9	14.1	0.0	13.9	19.8	0.0	55.7	44.6	0.0	53.2	39.9	0.0
Incr Delay (d2), s/veh	1.6	0.5	0.0	0.0	0.5	0.0	4.3	2.3	0.0	4.1	0.4	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	3.7	5.4	0.0	0.5	7.3	0.0	2.0	2.3	0.0	3.9	1.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.4	14.6	0.0	13.9	20.3	0.0	60.0	46.9	0.0	57.3	40.3	0.0
LnGrp LOS	B	B		B	C		E	D		E	D	
Approach Vol, veh/h	1077		A	867		A	210		A	345		A
Approach Delay, s/veh	14.8			20.0			55.0			52.9		
Approach LOS	B			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.1	72.9	11.1	27.9	16.9	64.1	15.7	23.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.1	56.5	17.0	23.4	23.5	38.1	22.1	18.3				
Max Q Clear Time (g_c+I1), s	3.2	16.0	6.4	4.5	11.7	20.2	10.6	6.5				
Green Ext Time (p_c), s	0.0	5.5	0.3	0.4	0.7	5.0	0.6	0.2				

Intersection Summary

HCM 6th Ctrl Delay 25.3

HCM 6th LOS C

Notes

User approved pedestrian interval to be less than phase max green.

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

HCM 6th Signalized Intersection Summary

17: 6th St & South St

12/23/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	592	308	23	757	12	245	14	24	14	14	11
Future Volume (veh/h)	22	592	308	23	757	12	245	14	24	14	14	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	24	643	0	25	823	13	266	15	26	15	15	12
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	324	1160		518	1139	18	430	442	375	435	227	182
Arrive On Green	0.82	0.82	0.00	0.62	0.62	0.62	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	662	1885	1598	793	1851	29	1394	1885	1598	1377	970	776
Grp Volume(v), veh/h	24	643	0	25	0	836	266	15	26	15	0	27
Grp Sat Flow(s),veh/h/ln	662	1885	1598	793	0	1880	1394	1885	1598	1377	0	1746
Q Serve(g_s), s	1.4	6.8	0.0	1.0	0.0	18.5	11.0	0.4	0.8	0.5	0.0	0.7
Cycle Q Clear(g_c), s	19.8	6.8	0.0	7.8	0.0	18.5	11.7	0.4	0.8	0.9	0.0	0.7
Prop In Lane	1.00		1.00	1.00		0.02	1.00		1.00	1.00		0.44
Lane Grp Cap(c), veh/h	324	1160		518	0	1157	430	442	375	435	0	409
V/C Ratio(X)	0.07	0.55		0.05	0.00	0.72	0.62	0.03	0.07	0.03	0.00	0.07
Avail Cap(c_a), veh/h	324	1160		518	0	1157	524	569	482	527	0	527
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.85	0.85	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.6	2.7	0.0	7.7	0.0	8.0	22.4	17.7	17.9	18.1	0.0	17.9
Incr Delay (d2), s/veh	0.4	1.6	0.0	0.0	0.0	2.2	1.5	0.0	0.1	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.5	0.0	0.1	0.0	5.0	3.5	0.2	0.3	0.2	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.0	4.3	0.0	7.7	0.0	10.2	23.9	17.7	17.9	18.1	0.0	17.9
LnGrp LOS	B	A		A	A	B	C	B	B	B	A	B
Approach Vol, veh/h	667		A	861			307			42		
Approach Delay, s/veh	4.5			10.2			23.1			18.0		
Approach LOS	A			B			C			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	41.4			18.6			41.4			18.6		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	32.9			18.1			32.9			18.1		
Max Q Clear Time (g_c+I1), s	21.8			2.9			20.5			13.7		
Green Ext Time (p_c), s	3.1			0.1			4.6			0.4		

Intersection Summary

HCM 6th Ctrl Delay 10.5

HCM 6th LOS B

Notes

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

HCM 6th Signalized Intersection Summary

7: 19th St & South St

12/23/2021

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↖	↑↑	↖↗	↗
Traffic Volume (veh/h)	835	331	407	867	628	216
Future Volume (veh/h)	835	331	407	867	628	216
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	908	0	442	942	683	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1	1	1	1
Cap, veh/h	1780		525	2444	759	
Arrive On Green	0.50	0.00	0.04	0.23	0.22	0.00
Sat Flow, veh/h	3770	0	1795	3676	3483	1598
Grp Volume(v), veh/h	908	0	442	942	683	0
Grp Sat Flow(s),veh/h/ln	1791	0	1795	1791	1742	1598
Q Serve(g_s), s	15.4	0.0	9.2	20.1	17.2	0.0
Cycle Q Clear(g_c), s	15.4	0.0	9.2	20.1	17.2	0.0
Prop In Lane		0.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1780		525	2444	759	
V/C Ratio(X)	0.51		0.84	0.39	0.90	
Avail Cap(c_a), veh/h	1780		691	2444	759	
HCM Platoon Ratio	1.00	1.00	0.33	0.33	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.73	0.73	1.00	0.00
Uniform Delay (d), s/veh	15.3	0.0	14.4	18.9	34.3	0.0
Incr Delay (d2), s/veh	1.0	0.0	5.4	0.3	15.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	0.0	4.2	9.5	8.7	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	16.3	0.0	19.8	19.2	50.1	0.0
LnGrp LOS	B		B	B	D	
Approach Vol, veh/h	908	A		1384	683	A
Approach Delay, s/veh	16.3			19.4	50.1	
Approach LOS	B			B	D	
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	16.7	49.2		24.1		65.9
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s	20.5	36.4		19.6		61.4
Max Q Clear Time (g_c+l1), s	11.2	17.4		19.2		22.1
Green Ext Time (p_c), s	1.0	5.7		0.1		7.2
Intersection Summary						
HCM 6th Ctrl Delay			25.5			
HCM 6th LOS			C			

Notes

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

HCM 6th Signalized Intersection Summary

8: 17th St & South St

12/23/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	111	907	21	233	1088	36	28	32	266	36	40	144
Future Volume (veh/h)	111	907	21	233	1088	36	28	32	266	36	40	144
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	121	986	23	253	1183	39	30	35	289	39	43	157
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	334	1891	44	397	1999	66	231	41	336	124	82	301
Arrive On Green	0.02	0.17	0.17	0.09	0.56	0.56	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1795	3578	83	1795	3539	117	1192	175	1449	1064	355	1297
Grp Volume(v), veh/h	121	494	515	253	599	623	30	0	324	39	0	200
Grp Sat Flow(s),veh/h/ln	1795	1791	1870	1795	1791	1864	1192	0	1624	1064	0	1652
Q Serve(g_s), s	2.7	22.5	22.5	5.5	19.7	19.7	2.0	0.0	17.2	3.3	0.0	9.5
Cycle Q Clear(g_c), s	2.7	22.5	22.5	5.5	19.7	19.7	11.5	0.0	17.2	20.5	0.0	9.5
Prop In Lane	1.00		0.04	1.00		0.06	1.00		0.89	1.00		0.79
Lane Grp Cap(c), veh/h	334	947	989	397	1012	1053	231	0	377	124	0	384
V/C Ratio(X)	0.36	0.52	0.52	0.64	0.59	0.59	0.13	0.00	0.86	0.32	0.00	0.52
Avail Cap(c_a), veh/h	439	947	989	606	1012	1053	231	0	377	124	0	384
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.50	0.50	0.50	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.9	26.8	26.8	12.8	12.8	12.8	35.2	0.0	33.1	43.0	0.0	30.2
Incr Delay (d2), s/veh	0.3	1.0	1.0	1.7	2.5	2.4	1.2	0.0	21.7	6.6	0.0	5.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	10.9	11.3	1.9	7.3	7.6	0.7	0.0	8.9	1.1	0.0	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.2	27.8	27.8	14.5	15.3	15.2	36.4	0.0	54.8	49.5	0.0	35.2
LnGrp LOS	B	C	C	B	B	B	D	A	D	D	A	D
Approach Vol, veh/h	1130			1475			354			239		
Approach Delay, s/veh	26.0			15.2			53.2			37.5		
Approach LOS	C			B			D			D		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.5	52.1		25.4	9.3	55.3		25.4				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	18.5	37.1		20.9	10.0	45.6		20.9				
Max Q Clear Time (g_c+I1), s	7.5	24.5		22.5	4.7	21.7		19.2				
Green Ext Time (p_c), s	0.5	4.8		0.0	0.1	8.1		0.4				
Intersection Summary												
HCM 6th Ctrl Delay	24.9											
HCM 6th LOS	C											

HCM 6th TWSC
3: 20th St & South St

12/23/2021

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	1012	440	0	1458	5	0	0	110	1	0	7
Future Vol, veh/h	1	1012	440	0	1458	5	0	0	110	1	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Free	-	-	None	-	-	Yield	-	-	None
Storage Length	200	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	1	1100	478	0	1585	5	0	0	120	1	0	8

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	1590	0	-	0
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.12	-	-	6.92
Critical Hdwy Stg 1	-	-	-	6.52
Critical Hdwy Stg 2	-	-	-	6.52
Follow-up Hdwy	2.21	-	-	3.31
Pot Cap-1 Maneuver	414	0	0	481
Stage 1	-	0	0	114
Stage 2	-	0	0	488
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	414	-	-	481
Mov Cap-2 Maneuver	-	-	-	21
Stage 1	-	-	-	114
Stage 2	-	-	-	366

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	14.9	38.2
HCM LOS			B	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	481	414	-	-	-	117
HCM Lane V/C Ratio	0.249	0.003	-	-	-	0.074
HCM Control Delay (s)	14.9	13.7	-	-	-	38.2
HCM Lane LOS	B	B	-	-	-	E
HCM 95th %tile Q(veh)	1	0	-	-	-	0.2

HCM 6th TWSC
11: 15th St & South St

12/23/2021

Intersection												
Int Delay, s/veh	26.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↱		↰	↰↱		↰	↱			↰↱	
Traffic Vol, veh/h	42	1074	75	20	1217	57	61	1	32	19	0	39
Future Vol, veh/h	42	1074	75	20	1217	57	61	1	32	19	0	39
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	-	200	-	-	100	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	46	1167	82	22	1323	62	66	1	35	21	0	42

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1385	0	0	1249	0	0	2006	2729	625	2074	2739	693
Stage 1	-	-	-	-	-	-	1300	1300	-	1398	1398	-
Stage 2	-	-	-	-	-	-	706	1429	-	676	1341	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.52	6.52	6.92	7.52	6.52	6.92
Critical Hdwy Stg 1	-	-	-	-	-	-	6.52	5.52	-	6.52	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.52	5.52	-	6.52	5.52	-
Follow-up Hdwy	2.21	-	-	2.21	-	-	3.51	4.01	3.31	3.51	4.01	3.31
Pot Cap-1 Maneuver	496	-	-	559	-	-	~ 35	20	430	31	20	388
Stage 1	-	-	-	-	-	-	172	232	-	149	208	-
Stage 2	-	-	-	-	-	-	395	201	-	412	221	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	496	-	-	559	-	-	~ 28	17	430	24	17	388
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 28	17	-	24	17	-
Stage 1	-	-	-	-	-	-	156	210	-	135	200	-
Stage 2	-	-	-	-	-	-	338	193	-	342	200	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.2	\$ 606.6	209.2
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	28	248	496	-	-	559	-	-	65
HCM Lane V/C Ratio	2.368	0.145	0.092	-	-	0.039	-	-	0.97
HCM Control Delay (s)	\$ 922.8	22	13	-	-	11.7	-	-	209.2
HCM Lane LOS	F	C	B	-	-	B	-	-	F
HCM 95th %tile Q(veh)	7.9	0.5	0.3	-	-	0.1	-	-	4.7

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

HCM 6th TWSC
20: Hwy W/Salers Ln & South St

12/23/2021

Intersection												
Int Delay, s/veh	4.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	371	96	6	449	14	113	1	19	2	1	4
Future Vol, veh/h	4	371	96	6	449	14	113	1	19	2	1	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	4	403	104	7	488	15	123	1	21	2	1	4
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	503	0	0	507	0	0	975	980	455	984	1025	496
Stage 1	-	-	-	-	-	-	463	463	-	510	510	-
Stage 2	-	-	-	-	-	-	512	517	-	474	515	-
Critical Hdwy	4.11	-	-	4.11	-	-	7.11	6.51	6.21	7.11	6.51	6.21
Critical Hdwy Stg 1	-	-	-	-	-	-	6.11	5.51	-	6.11	5.51	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.11	5.51	-	6.11	5.51	-
Follow-up Hdwy	2.209	-	-	2.209	-	-	3.509	4.009	3.309	3.509	4.009	3.309
Pot Cap-1 Maneuver	1067	-	-	1063	-	-	232	251	607	228	236	576
Stage 1	-	-	-	-	-	-	581	566	-	548	539	-
Stage 2	-	-	-	-	-	-	547	535	-	573	536	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1067	-	-	1063	-	-	227	247	607	217	233	576
Mov Cap-2 Maneuver	-	-	-	-	-	-	227	247	-	217	233	-
Stage 1	-	-	-	-	-	-	578	563	-	545	534	-
Stage 2	-	-	-	-	-	-	537	530	-	550	533	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.1			37.7			15.8		
HCM LOS							E			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	249	1067	-	-	1063	-	-	342				
HCM Lane V/C Ratio	0.581	0.004	-	-	0.006	-	-	0.022				
HCM Control Delay (s)	37.7	8.4	0	-	8.4	0	-	15.8				
HCM Lane LOS	E	A	A	-	A	A	-	C				
HCM 95th %tile Q(veh)	3.3	0	-	-	0	-	-	0.1				

Intersection												
Int Delay, s/veh	2.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	51	314	21	1	361	4	21	5	2	11	1	72
Future Vol, veh/h	51	314	21	1	361	4	21	5	2	11	1	72
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	55	341	23	1	392	4	23	5	2	12	1	78
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	396	0	0	364	0	0	899	861	353	862	870	394
Stage 1	-	-	-	-	-	-	463	463	-	396	396	-
Stage 2	-	-	-	-	-	-	436	398	-	466	474	-
Critical Hdwy	4.11	-	-	4.11	-	-	7.11	6.51	6.21	7.11	6.51	6.21
Critical Hdwy Stg 1	-	-	-	-	-	-	6.11	5.51	-	6.11	5.51	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.11	5.51	-	6.11	5.51	-
Follow-up Hdwy	2.209	-	-	2.209	-	-	3.509	4.009	3.309	3.509	4.009	3.309
Pot Cap-1 Maneuver	1168	-	-	1200	-	-	261	294	693	276	291	657
Stage 1	-	-	-	-	-	-	581	566	-	631	606	-
Stage 2	-	-	-	-	-	-	601	605	-	579	559	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1168	-	-	1200	-	-	219	276	693	259	274	657
Mov Cap-2 Maneuver	-	-	-	-	-	-	219	276	-	259	274	-
Stage 1	-	-	-	-	-	-	547	533	-	594	605	-
Stage 2	-	-	-	-	-	-	528	604	-	538	526	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.1			0			22.2			13		
HCM LOS							C			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	240	1168	-	-	1200	-	-	539				
HCM Lane V/C Ratio	0.127	0.047	-	-	0.001	-	-	0.169				
HCM Control Delay (s)	22.2	8.2	0	-	8	0	-	13				
HCM Lane LOS	C	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.4	0.1	-	-	0	-	-	0.6				

HCM 6th Signalized Intersection Summary

8: 17th St & South St

12/23/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	662	9	51	1393	16	106	6	54	31	12	131
Future Volume (veh/h)	44	662	9	51	1393	16	106	6	54	31	12	131
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	48	720	10	55	1514	17	115	7	59	34	13	142
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	247	2099	29	578	2115	24	245	37	313	325	29	319
Arrive On Green	0.08	1.00	1.00	0.04	0.59	0.59	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	1767	3560	49	1767	3571	40	1222	170	1429	1325	134	1459
Grp Volume(v), veh/h	48	356	374	55	747	784	115	0	66	34	0	155
Grp Sat Flow(s),veh/h/ln	1767	1763	1847	1767	1763	1848	1222	0	1598	1325	0	1593
Q Serve(g_s), s	0.9	0.0	0.0	1.1	27.0	27.0	8.1	0.0	3.0	1.9	0.0	7.6
Cycle Q Clear(g_c), s	0.9	0.0	0.0	1.1	27.0	27.0	15.7	0.0	3.0	5.0	0.0	7.6
Prop In Lane	1.00		0.03	1.00		0.02	1.00		0.89	1.00		0.92
Lane Grp Cap(c), veh/h	247	1039	1089	578	1044	1095	245	0	350	325	0	349
V/C Ratio(X)	0.19	0.34	0.34	0.10	0.72	0.72	0.47	0.00	0.19	0.10	0.00	0.44
Avail Cap(c_a), veh/h	296	1039	1089	608	1044	1095	245	0	350	325	0	349
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.91	0.91	0.91	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.6	0.0	0.0	6.3	13.0	13.0	37.2	0.0	28.6	30.7	0.0	30.4
Incr Delay (d2), s/veh	0.3	0.8	0.8	0.1	4.2	4.0	6.4	0.0	1.2	0.6	0.0	4.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.2	0.2	0.3	9.8	10.3	2.8	0.0	1.3	0.7	0.0	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.9	0.8	0.8	6.4	17.2	17.0	43.6	0.0	29.8	31.3	0.0	34.5
LnGrp LOS	B	A	A	A	B	B	D	A	C	C	A	C
Approach Vol, veh/h	778			1586			181			189		
Approach Delay, s/veh	1.4			16.7			38.6			33.9		
Approach LOS	A			B			D			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.2	57.6		24.2	8.0	57.8		24.2				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.3	51.5		19.7	6.0	50.8		19.7				
Max Q Clear Time (g_c+I1), s	3.1	2.0		9.6	2.9	29.0		17.7				
Green Ext Time (p_c), s	0.0	4.5		0.7	0.0	10.7		0.1				
Intersection Summary												
HCM 6th Ctrl Delay	15.0											
HCM 6th LOS	B											

HCM 6th Signalized Intersection Summary

20: Hwy W/Salers Ln & South St

12/23/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	231	49	20	570	5	193	32	22	5	2	6
Future Volume (veh/h)	21	231	49	20	570	5	193	32	22	5	2	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	23	251	53	22	620	5	210	35	24	5	2	7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	393	686	145	620	849	7	564	239	164	519	84	295
Arrive On Green	0.46	0.46	0.46	0.46	0.46	0.46	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	794	1485	314	1067	1838	15	1395	1026	703	1333	362	1266
Grp Volume(v), veh/h	23	0	304	22	0	625	210	0	59	5	0	9
Grp Sat Flow(s),veh/h/ln	794	0	1799	1067	0	1853	1395	0	1729	1333	0	1628
Q Serve(g_s), s	0.7	0.0	3.2	0.4	0.0	8.1	4.0	0.0	0.8	0.1	0.0	0.1
Cycle Q Clear(g_c), s	8.8	0.0	3.2	3.6	0.0	8.1	4.2	0.0	0.8	0.9	0.0	0.1
Prop In Lane	1.00		0.17	1.00		0.01	1.00		0.41	1.00		0.78
Lane Grp Cap(c), veh/h	393	0	831	620	0	855	564	0	404	519	0	380
V/C Ratio(X)	0.06	0.00	0.37	0.04	0.00	0.73	0.37	0.00	0.15	0.01	0.00	0.02
Avail Cap(c_a), veh/h	739	0	1615	1085	0	1664	1160	0	1142	1089	0	1075
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.0	0.0	5.1	6.3	0.0	6.5	10.3	0.0	9.0	9.3	0.0	8.7
Incr Delay (d2), s/veh	0.1	0.0	0.3	0.0	0.0	1.2	0.4	0.0	0.2	0.0	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	0.1	0.0	0.4	0.0	0.0	1.1	0.9	0.0	0.2	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.1	0.0	5.4	6.3	0.0	7.7	10.7	0.0	9.1	9.3	0.0	8.7
LnGrp LOS	B	A	A	A	A	A	B	A	A	A	A	A
Approach Vol, veh/h	327			647			269			14		
Approach Delay, s/veh	5.7			7.6			10.4			9.0		
Approach LOS	A			A			B			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	11.4			18.1			11.4			18.1		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	19.5			26.5			19.5			26.5		
Max Q Clear Time (g_c+I1), s	6.2			10.8			2.9			10.1		
Green Ext Time (p_c), s	0.7			1.5			0.0			3.5		
Intersection Summary												
HCM 6th Ctrl Delay	7.7											
HCM 6th LOS	A											

HCM 6th TWSC
3: 20th St & South St

12/23/2021

Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↱			↰↱				↰			↰
Traffic Vol, veh/h	4	739	123	0	1715	1	0	0	20	0	0	12
Future Vol, veh/h	4	739	123	0	1715	1	0	0	20	0	0	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Free	-	-	None	-	-	Yield	-	-	None
Storage Length	200	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	4	803	134	0	1864	1	0	0	22	0	0	13

Major/Minor	Major1	Major2		Minor1		Minor2	
Conflicting Flow All	1865	0	-	-	0	-	-
Stage 1	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-
Critical Hdwy	4.16	-	-	-	-	6.96	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-
Follow-up Hdwy	2.23	-	-	-	-	3.33	-
Pot Cap-1 Maneuver	316	-	0	0	-	0	0
Stage 1	-	-	0	0	-	0	0
Stage 2	-	-	0	0	-	0	0
Platoon blocked, %	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	316	-	-	-	-	595	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	11.3	19.2
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	595	316	-	-	-	266
HCM Lane V/C Ratio	0.037	0.014	-	-	-	0.049
HCM Control Delay (s)	11.3	16.6	-	-	-	19.2
HCM Lane LOS	B	C	-	-	-	C
HCM 95th %tile Q(veh)	0.1	0	-	-	-	0.2

HCM 6th TWSC
11: 15th St & South St

12/23/2021

Intersection												
Int Delay, s/veh	0.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↱		↰	↰↱				↰			↰
Traffic Vol, veh/h	1	732	24	26	1464	15	0	0	29	0	0	2
Future Vol, veh/h	1	732	24	26	1464	15	0	0	29	0	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	-	200	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	1	796	26	28	1591	16	0	0	32	0	0	2
Major/Minor	Major1		Major2			Minor1			Minor2			
Conflicting Flow All	1607	0	0	822	0	0	-	-	411	-	-	804
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.16	-	-	4.16	-	-	-	-	6.96	-	-	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.23	-	-	2.23	-	-	-	-	3.33	-	-	3.33
Pot Cap-1 Maneuver	398	-	-	797	-	-	0	0	587	0	0	324
Stage 1	-	-	-	-	-	-	0	0	-	0	0	-
Stage 2	-	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	398	-	-	797	-	-	-	-	587	-	-	324
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	0		0.2			11.5			16.2			
HCM LOS						B			C			
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	587	398	-	-	797	-	-	324				
HCM Lane V/C Ratio	0.054	0.003	-	-	0.035	-	-	0.007				
HCM Control Delay (s)	11.5	14.1	-	-	9.7	-	-	16.2				
HCM Lane LOS	B	B	-	-	A	-	-	C				
HCM 95th %tile Q(veh)	0.2	0	-	-	0.1	-	-	0				

HCM 6th TWSC
26: 15th St & New Connection

12/23/2021

Intersection												
Int Delay, s/veh	3.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	0	0	0	0	0	0	82	29	0	0	50	0
Future Vol, veh/h	0	0	0	0	0	0	82	29	0	0	50	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	0	0	0	0	0	89	32	0	0	54	0

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	264	264	54	264	264	32	54	0	0	32	0	0
Stage 1	54	54	-	210	210	-	-	-	-	-	-	-
Stage 2	210	210	-	54	54	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	687	640	1010	687	640	1039	1545	-	-	1574	-	-
Stage 1	956	848	-	790	727	-	-	-	-	-	-	-
Stage 2	790	727	-	956	848	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	656	602	1010	656	602	1039	1545	-	-	1574	-	-
Mov Cap-2 Maneuver	656	602	-	656	602	-	-	-	-	-	-	-
Stage 1	900	848	-	743	684	-	-	-	-	-	-	-
Stage 2	743	684	-	956	848	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	5.5	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1545	-	-	-	1574	-	-
HCM Lane V/C Ratio	0.058	-	-	-	-	-	-
HCM Control Delay (s)	7.5	0	-	0	0	-	-
HCM Lane LOS	A	A	-	A	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	-	0	-	-

HCM 6th TWSC
27: 17th St & New Connection

12/23/2021

Intersection						
Int Delay, s/veh	3.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	82	84	0	0	72
Future Vol, veh/h	0	82	84	0	0	72
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	89	91	0	0	78

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	169	91	0
Stage 1	91	-	-
Stage 2	78	-	-
Critical Hdwy	6.43	6.23	-
Critical Hdwy Stg 1	5.43	-	-
Critical Hdwy Stg 2	5.43	-	-
Follow-up Hdwy	3.527	3.327	-
Pot Cap-1 Maneuver	819	964	-
Stage 1	930	-	-
Stage 2	943	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	819	964	-
Mov Cap-2 Maneuver	819	-	-
Stage 1	930	-	-
Stage 2	943	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.1	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	964	1498
HCM Lane V/C Ratio	-	-	0.092	-
HCM Control Delay (s)	-	-	9.1	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0

HCM 6th Signalized Intersection Summary

8: 17th St & South St

12/23/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	168	1447	25	136	1026	37	102	45	224	107	41	137
Future Volume (veh/h)	168	1447	25	136	1026	37	102	45	224	107	41	137
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	183	1573	27	148	1115	40	111	49	243	116	45	149
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	323	1825	31	227	1745	63	317	83	410	231	115	382
Arrive On Green	0.09	0.68	0.68	0.06	0.50	0.50	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1781	3575	61	1781	3499	126	1189	273	1354	1087	381	1262
Grp Volume(v), veh/h	183	781	819	148	566	589	111	0	292	116	0	194
Grp Sat Flow(s),veh/h/ln	1781	1777	1859	1781	1777	1848	1189	0	1627	1087	0	1643
Q Serve(g_s), s	5.3	36.0	36.2	4.2	24.8	24.9	8.6	0.0	16.2	10.8	0.0	9.9
Cycle Q Clear(g_c), s	5.3	36.0	36.2	4.2	24.8	24.9	18.5	0.0	16.2	26.9	0.0	9.9
Prop In Lane	1.00		0.03	1.00		0.07	1.00		0.83	1.00		0.77
Lane Grp Cap(c), veh/h	323	907	949	227	886	922	317	0	493	231	0	498
V/C Ratio(X)	0.57	0.86	0.86	0.65	0.64	0.64	0.35	0.00	0.59	0.50	0.00	0.39
Avail Cap(c_a), veh/h	457	907	949	288	886	922	317	0	493	231	0	498
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.2	14.1	14.1	21.2	19.5	19.5	36.5	0.0	31.4	42.8	0.0	29.2
Incr Delay (d2), s/veh	0.1	1.1	1.1	3.4	3.5	3.4	3.0	0.0	5.2	7.6	0.0	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	9.1	9.6	1.9	10.2	10.6	2.8	0.0	7.0	3.4	0.0	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.3	15.2	15.2	24.7	23.1	22.9	39.6	0.0	36.6	50.4	0.0	31.5
LnGrp LOS	B	B	B	C	C	C	D	A	D	D	A	C
Approach Vol, veh/h	1783				1303				403			
Approach Delay, s/veh	15.2				23.2				37.4			
Approach LOS	B				C				D			
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.8	58.6		36.6	12.0	57.4		36.6				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	9.9	50.5		32.1	15.5	44.9		32.1				
Max Q Clear Time (g_c+I1), s	6.2	38.2		28.9	7.3	26.9		20.5				
Green Ext Time (p_c), s	0.1	7.8		0.5	0.3	6.7		1.8				
Intersection Summary												
HCM 6th Ctrl Delay	22.2											
HCM 6th LOS	C											

HCM 6th Signalized Intersection Summary

20: Hwy W/Salers Ln & South St

12/23/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	617	209	16	374	4	112	2	15	2	1	6
Future Volume (veh/h)	2	617	209	16	374	4	112	2	15	2	1	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	2	671	227	17	407	4	122	2	16	2	1	7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	709	829	280	357	1147	11	369	21	169	360	24	167
Arrive On Green	0.62	0.62	0.62	0.62	0.62	0.62	0.12	0.12	0.12	0.12	0.12	0.12
Sat Flow, veh/h	975	1337	452	620	1849	18	1407	179	1433	1395	202	1414
Grp Volume(v), veh/h	2	0	898	17	0	411	122	0	18	2	0	8
Grp Sat Flow(s),veh/h/ln	975	0	1789	620	0	1867	1407	0	1612	1395	0	1616
Q Serve(g_s), s	0.0	0.0	13.2	0.7	0.0	3.7	2.9	0.0	0.3	0.0	0.0	0.2
Cycle Q Clear(g_c), s	3.7	0.0	13.2	13.9	0.0	3.7	3.0	0.0	0.3	0.4	0.0	0.2
Prop In Lane	1.00		0.25	1.00		0.01	1.00		0.89	1.00		0.88
Lane Grp Cap(c), veh/h	709	0	1109	357	0	1158	369	0	190	360	0	191
V/C Ratio(X)	0.00	0.00	0.81	0.05	0.00	0.35	0.33	0.00	0.09	0.01	0.00	0.04
Avail Cap(c_a), veh/h	1040	0	1717	567	0	1792	940	0	844	926	0	846
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	4.1	0.0	5.0	10.3	0.0	3.2	14.8	0.0	13.5	13.7	0.0	13.4
Incr Delay (d2), s/veh	0.0	0.0	1.7	0.1	0.0	0.2	0.5	0.0	0.2	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.7	0.1	0.0	0.1	0.8	0.0	0.1	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.1	0.0	6.7	10.3	0.0	3.4	15.3	0.0	13.7	13.7	0.0	13.5
LnGrp LOS	A	A	A	B	A	A	B	A	B	B	A	B
Approach Vol, veh/h	900			428			140			10		
Approach Delay, s/veh	6.7			3.6			15.1			13.6		
Approach LOS	A			A			B			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	25.8			8.6			25.8			8.6		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	33.0			18.0			33.0			18.0		
Max Q Clear Time (g_c+l1), s	15.2			2.4			15.9			5.0		
Green Ext Time (p_c), s	6.2			0.0			2.2			0.3		
Intersection Summary												
HCM 6th Ctrl Delay	6.6											
HCM 6th LOS	A											

HCM 6th TWSC
3: 20th St & South St

12/23/2021

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	1594	385	0	1509	1	0	0	96	0	0	1
Future Vol, veh/h	11	1594	385	0	1509	1	0	0	96	0	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Free	-	-	None	-	-	Yield	-	-	None
Storage Length	200	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	1733	418	0	1640	1	0	0	104	0	0	1

Major/Minor	Major1	Major2		Minor1		Minor2	
Conflicting Flow All	1641	0	-	-	0	-	867
Stage 1	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-
Critical Hdwy	4.14	-	-	-	-	6.94	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-
Follow-up Hdwy	2.22	-	-	-	-	3.32	-
Pot Cap-1 Maneuver	391	-	0	0	-	0	296
Stage 1	-	-	0	0	-	0	-
Stage 2	-	-	0	0	-	0	-
Platoon blocked, %	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	391	-	-	-	-	-	296
Mov Cap-2 Maneuver	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	23.6	16.4
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	296	391	-	-	-	318
HCM Lane V/C Ratio	0.353	0.031	-	-	-	0.003
HCM Control Delay (s)	23.6	14.5	-	-	-	16.4
HCM Lane LOS	C	B	-	-	-	C
HCM 95th %tile Q(veh)	1.5	0.1	-	-	-	0

HCM 6th TWSC
11: 15th St & South St

12/23/2021

Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	29	1689	147	45	1086	59	0	0	35	0	0	42
Future Vol, veh/h	29	1689	147	45	1086	59	0	0	35	0	0	42
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	-	200	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	32	1836	160	49	1180	64	0	0	38	0	0	46

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1244	0	0	1996	0	0	-	-	998	-	-	622
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.14	-	-	4.14	-	-	-	-	6.94	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	-	-	3.32	-	-	3.32
Pot Cap-1 Maneuver	555	-	-	284	-	-	0	0	242	0	0	430
Stage 1	-	-	-	-	-	-	0	0	-	0	0	-
Stage 2	-	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	555	-	-	284	-	-	-	-	242	-	-	430
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.8			22.6			14.4		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	242	555	-	-	284	-	-	430
HCM Lane V/C Ratio	0.157	0.057	-	-	0.172	-	-	0.106
HCM Control Delay (s)	22.6	11.9	-	-	20.3	-	-	14.4
HCM Lane LOS	C	B	-	-	C	-	-	B
HCM 95th %tile Q(veh)	0.5	0.2	-	-	0.6	-	-	0.4

HCM 6th TWSC
26: 17th St & New Connection

12/23/2021

Intersection

Int Delay, s/veh 1.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	72	227	0	0	202
Future Vol, veh/h	0	72	227	0	0	202
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	78	247	0	0	220

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	467	247	0
Stage 1	247	-	-
Stage 2	220	-	-
Critical Hdwy	6.42	6.22	4.12
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	2.218
Pot Cap-1 Maneuver	554	792	1319
Stage 1	794	-	-
Stage 2	817	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	554	792	1319
Mov Cap-2 Maneuver	554	-	-
Stage 1	794	-	-
Stage 2	817	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	792	1319	-
HCM Lane V/C Ratio	-	0.099	-	-
HCM Control Delay (s)	-	10	0	-
HCM Lane LOS	-	B	A	-
HCM 95th %tile Q(veh)	-	0.3	0	-

HCM 6th TWSC
27: 15th St & New Connection

12/23/2021

Intersection												
Int Delay, s/veh	1.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	0	0	0	72	35	0	0	192	0
Future Vol, veh/h	0	0	0	0	0	0	72	35	0	0	192	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	78	38	0	0	209	0
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	403	403	209	403	403	38	209	0	0	38	0	0
Stage 1	209	209	-	194	194	-	-	-	-	-	-	-
Stage 2	194	194	-	209	209	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	558	536	831	558	536	1034	1362	-	-	1572	-	-
Stage 1	793	729	-	808	740	-	-	-	-	-	-	-
Stage 2	808	740	-	793	729	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	533	504	831	533	504	1034	1362	-	-	1572	-	-
Mov Cap-2 Maneuver	533	504	-	533	504	-	-	-	-	-	-	-
Stage 1	746	729	-	760	696	-	-	-	-	-	-	-
Stage 2	760	696	-	793	729	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	0		0		5.3		0					
HCM LOS	A		A									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1362	-	-	-	-	1572	-	-				
HCM Lane V/C Ratio	0.057	-	-	-	-	-	-	-				
HCM Control Delay (s)	7.8	0	-	0	0	0	-	-				
HCM Lane LOS	A	A	-	A	A	A	-	-				
HCM 95th %tile Q(veh)	0.2	-	-	-	-	0	-	-				

HCM 6th Signalized Intersection Summary

8: 17th St & South St

12/23/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	111	906	21	233	1027	36	89	33	266	56	40	144
Future Volume (veh/h)	111	906	21	233	1027	36	89	33	266	56	40	144
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	121	985	23	253	1116	39	97	36	289	61	43	157
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	355	1797	42	402	1904	67	243	42	338	135	83	303
Arrive On Green	0.02	0.17	0.17	0.10	0.54	0.54	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1795	3578	84	1795	3531	123	1192	180	1445	1063	355	1297
Grp Volume(v), veh/h	121	493	515	253	566	589	97	0	325	61	0	200
Grp Sat Flow(s),veh/h/ln	1795	1791	1870	1795	1791	1863	1192	0	1625	1063	0	1652
Q Serve(g_s), s	2.5	20.2	20.2	5.2	17.0	17.0	6.2	0.0	15.3	3.4	0.0	8.4
Cycle Q Clear(g_c), s	2.5	20.2	20.2	5.2	17.0	17.0	14.6	0.0	15.3	18.7	0.0	8.4
Prop In Lane	1.00		0.04	1.00		0.07	1.00		0.89	1.00		0.79
Lane Grp Cap(c), veh/h	355	900	939	402	966	1005	243	0	380	135	0	386
V/C Ratio(X)	0.34	0.55	0.55	0.63	0.59	0.59	0.40	0.00	0.86	0.45	0.00	0.52
Avail Cap(c_a), veh/h	452	900	939	579	966	1005	243	0	380	135	0	386
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.43	0.43	0.43	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.4	25.0	25.0	12.2	12.4	12.4	33.1	0.0	29.4	38.8	0.0	26.7
Incr Delay (d2), s/veh	0.2	1.0	1.0	1.6	2.6	2.5	4.8	0.0	21.2	10.6	0.0	4.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	9.7	10.1	1.7	6.2	6.4	2.1	0.0	8.0	1.6	0.0	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.6	26.1	26.0	13.8	15.0	14.9	37.9	0.0	50.5	49.3	0.0	31.6
LnGrp LOS	B	C	C	B	B	B	D	A	D	D	A	C
Approach Vol, veh/h	1129			1408			422			261		
Approach Delay, s/veh	24.4			14.8			47.6			35.8		
Approach LOS	C			B			D			D		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.1	44.7		23.2	9.2	47.6		23.2				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	15.5	32.3		18.7	9.0	38.8		18.7				
Max Q Clear Time (g_c+I1), s	7.2	22.2		20.7	4.5	19.0		17.3				
Green Ext Time (p_c), s	0.4	4.2		0.0	0.1	7.0		0.4				
Intersection Summary												
HCM 6th Ctrl Delay	24.2											
HCM 6th LOS	C											

HCM 6th Signalized Intersection Summary

20: Hwy W/Salers Ln & South St

12/23/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	371	96	6	449	14	113	1	19	2	1	4
Future Volume (veh/h)	4	371	96	6	449	14	113	1	19	2	1	4
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	4	403	104	7	488	15	123	1	21	2	1	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	477	591	152	466	744	23	601	15	324	584	70	278
Arrive On Green	0.41	0.41	0.41	0.41	0.41	0.41	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	903	1445	373	899	1819	56	1422	73	1536	1401	330	1318
Grp Volume(v), veh/h	4	0	507	7	0	503	123	0	22	2	0	5
Grp Sat Flow(s),veh/h/ln	903	0	1818	899	0	1875	1422	0	1609	1401	0	1648
Q Serve(g_s), s	0.1	0.0	5.4	0.2	0.0	5.1	1.8	0.0	0.3	0.0	0.0	0.1
Cycle Q Clear(g_c), s	5.2	0.0	5.4	5.6	0.0	5.1	1.8	0.0	0.3	0.3	0.0	0.1
Prop In Lane	1.00		0.21	1.00		0.03	1.00		0.95	1.00		0.80
Lane Grp Cap(c), veh/h	477	0	743	466	0	767	601	0	340	584	0	348
V/C Ratio(X)	0.01	0.00	0.68	0.02	0.00	0.66	0.20	0.00	0.06	0.00	0.00	0.01
Avail Cap(c_a), veh/h	794	0	1382	782	0	1425	1382	0	1223	1353	0	1252
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.8	0.0	5.7	8.0	0.0	5.7	8.1	0.0	7.5	7.6	0.0	7.4
Incr Delay (d2), s/veh	0.0	0.0	1.1	0.0	0.0	1.0	0.2	0.0	0.1	0.0	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	0.0	0.0	0.5	0.0	0.0	0.4	0.3	0.0	0.1	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.8	0.0	6.9	8.0	0.0	6.6	8.3	0.0	7.6	7.6	0.0	7.4
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h	511			510			145			7		
Approach Delay, s/veh	6.9			6.6			8.2			7.5		
Approach LOS	A			A			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	9.5			14.2			9.5			14.2		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	18.0			18.0			18.0			18.0		
Max Q Clear Time (g_c+I1), s	3.8			7.4			2.3			7.6		
Green Ext Time (p_c), s	0.3			2.2			0.0			2.1		
Intersection Summary												
HCM 6th Ctrl Delay	6.9											
HCM 6th LOS	A											

HCM 6th TWSC
3: 20th St & South St

12/23/2021

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↱			↰↱				↰			↰
Traffic Vol, veh/h	1	1012	440	0	1458	5	0	0	110	0	0	7
Future Vol, veh/h	1	1012	440	0	1458	5	0	0	110	0	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Free	-	-	None	-	-	Yield	-	-	None
Storage Length	200	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	1	1100	478	0	1585	5	0	0	120	0	0	8
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1590	0	-	-	-	0	-	-	550	-	-	795
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.12	-	-	-	-	-	-	-	6.92	-	-	6.92
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.21	-	-	-	-	-	-	-	3.31	-	-	3.31
Pot Cap-1 Maneuver	414	-	0	0	-	-	0	0	481	0	0	333
Stage 1	-	-	0	0	-	-	0	0	-	0	0	-
Stage 2	-	-	0	0	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	414	-	-	-	-	-	-	-	481	-	-	333
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0			14.9			16.1		
HCM LOS							B			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBL	WBT	WBR	SBLn1					
Capacity (veh/h)	481	414	-	-	-	-	333					
HCM Lane V/C Ratio	0.249	0.003	-	-	-	-	0.023					
HCM Control Delay (s)	14.9	13.7	-	-	-	-	16.1					
HCM Lane LOS	B	B	-	-	-	-	C					
HCM 95th %tile Q(veh)	1	0	-	-	-	-	0.1					

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	42	1093	75	20	1217	57	0	0	32	0	0	39
Future Vol, veh/h	42	1093	75	20	1217	57	0	0	32	0	0	39
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	-	200	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	46	1188	82	22	1323	62	0	0	35	0	0	42
Major/Minor	Major1		Major2			Minor1			Minor2			
Conflicting Flow All	1385	0	0	1270	0	0	-	-	635	-	-	693
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.12	-	-	4.12	-	-	-	-	6.92	-	-	6.92
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.21	-	-	2.21	-	-	-	-	3.31	-	-	3.31
Pot Cap-1 Maneuver	496	-	-	548	-	-	0	0	424	0	0	388
Stage 1	-	-	-	-	-	-	0	0	-	0	0	-
Stage 2	-	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	496	-	-	548	-	-	-	-	424	-	-	388
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	0.5		0.2			14.2			15.4			
HCM LOS						B			C			
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	424	496	-	-	548	-	-	388				
HCM Lane V/C Ratio	0.082	0.092	-	-	0.04	-	-	0.109				
HCM Control Delay (s)	14.2	13	-	-	11.8	-	-	15.4				
HCM Lane LOS	B	B	-	-	B	-	-	C				
HCM 95th %tile Q(veh)	0.3	0.3	-	-	0.1	-	-	0.4				

HCM 6th TWSC
26: 15th St & New Connection

12/23/2021

Intersection												
Int Delay, s/veh	2.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	0	0	0	62	32	0	0	95	0
Future Vol, veh/h	0	0	0	0	0	0	62	32	0	0	95	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	0	0	0	0	0	0	67	35	0	0	103	0
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	272	272	103	272	272	35	103	0	0	35	0	0
Stage 1	103	103	-	169	169	-	-	-	-	-	-	-
Stage 2	169	169	-	103	103	-	-	-	-	-	-	-
Critical Hdwy	7.11	6.51	6.21	7.11	6.51	6.21	4.11	-	-	4.11	-	-
Critical Hdwy Stg 1	6.11	5.51	-	6.11	5.51	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.11	5.51	-	6.11	5.51	-	-	-	-	-	-	-
Follow-up Hdwy	3.509	4.009	3.309	3.509	4.009	3.309	2.209	-	-	2.209	-	-
Pot Cap-1 Maneuver	683	636	955	683	636	1041	1495	-	-	1583	-	-
Stage 1	905	812	-	835	761	-	-	-	-	-	-	-
Stage 2	835	761	-	905	812	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	659	607	955	659	607	1041	1495	-	-	1583	-	-
Mov Cap-2 Maneuver	659	607	-	659	607	-	-	-	-	-	-	-
Stage 1	863	812	-	797	726	-	-	-	-	-	-	-
Stage 2	797	726	-	905	812	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	0		0			5			0			
HCM LOS	A		A									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1495	-	-	-	-	1583	-	-				
HCM Lane V/C Ratio	0.045	-	-	-	-	-	-	-				
HCM Control Delay (s)	7.5	0	-	0	0	0	-	-				
HCM Lane LOS	A	A	-	A	A	A	-	-				
HCM 95th %tile Q(veh)	0.1	-	-	-	-	0	-	-				

HCM 6th TWSC
27: 17th St & New Connection

12/23/2021

Intersection

Int Delay, s/veh 1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	62	326	0	0	294
Future Vol, veh/h	0	62	326	0	0	294
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	0	67	354	0	0	320

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	674	354	0
Stage 1	354	-	-
Stage 2	320	-	-
Critical Hdwy	6.41	6.21	4.11
Critical Hdwy Stg 1	5.41	-	-
Critical Hdwy Stg 2	5.41	-	-
Follow-up Hdwy	3.509	3.309	2.209
Pot Cap-1 Maneuver	422	692	1210
Stage 1	713	-	-
Stage 2	738	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	422	692	1210
Mov Cap-2 Maneuver	422	-	-
Stage 1	713	-	-
Stage 2	738	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.8	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	692	1210	-
HCM Lane V/C Ratio	-	0.097	-	-
HCM Control Delay (s)	-	10.8	0	-
HCM Lane LOS	-	B	A	-
HCM 95th %tile Q(veh)	-	0.3	0	-

LANE SUMMARY

 Site: 101 [2043 AM BUILD (Site Folder: General)]

New Site
Site Category: (None)
Roundabout

Lane Use and Performance													
	DEMAND FLOWS [Total HV] veh/h %		Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh Dist] ft		Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: RTE W													
Lane 1 ^d	268	3.0	999	0.269	100	6.3	LOS A	1.3	33.3	Full	1600	0.0	0.0
Approach	268	3.0		0.269		6.3	LOS A	1.3	33.3				
East: SOUTH ST													
Lane 1 ^d	647	3.0	1012	0.639	100	12.8	LOS B	7.7	196.8	Full	1600	0.0	0.0
Approach	647	3.0		0.639		12.8	LOS B	7.7	196.8				
North: SALERS													
Lane 1 ^d	14	3.0	557	0.025	100	6.8	LOS A	0.1	2.3	Full	1600	0.0	0.0
Approach	14	3.0		0.025		6.8	LOS A	0.1	2.3				
West: SOUTH ST													
Lane 1 ^d	327	3.0	1322	0.248	100	4.9	LOS A	1.3	33.8	Full	1600	0.0	0.0
Approach	327	3.0		0.248		4.9	LOS A	1.3	33.8				
Intersection	1257	3.0		0.639		9.3	LOS A	7.7	196.8				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Geometric Delay is not included).

Queue Model: HCM Queue Formula.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

^d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)											
South: RTE W											
Mov.	L2	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL Ov.	Ov. Lane No.	
From S To Exit:	W	N	E			Cap. veh/h	v/c	%	%		
Lane 1	210	35	24	268	3.0	999	0.269	100	NA	NA	
Approach	210	35	24	268	3.0		0.269				
East: SOUTH ST											
Mov.	L2	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL Ov.	Ov. Lane No.	
From E To Exit:	S	W	N			Cap. veh/h	v/c	%	%		
Lane 1	5	620	22	647	3.0	1012	0.639	100	NA	NA	
Approach	5	620	22	647	3.0		0.639				

North: SALERS											
Mov.	L2	T1	R2	Total	%HV		Deg.	Lane	Prob.	Ov.	
From N						Cap.	Satn	Util.	SL	Ov.	Lane
To Exit:	E	S	W			veh/h	v/c	%	%		No.
Lane 1	5	2	7	14	3.0	557	0.025	100	NA	NA	
Approach	5	2	7	14	3.0		0.025				
West: SOUTH ST											
Mov.	L2	T1	R2	Total	%HV		Deg.	Lane	Prob.	Ov.	
From W						Cap.	Satn	Util.	SL	Ov.	Lane
To Exit:	N	E	S			veh/h	v/c	%	%		No.
Lane 1	23	251	53	327	3.0	1322	0.248	100	NA	NA	
Approach	23	251	53	327	3.0		0.248				
Total %HV Deg.Satn (v/c)											
Intersection	1257	3.0		0.639							

Lane flow rates given in this report are based on the arrival flow rates subject to upstream capacity constraint where applicable.

Merge Analysis												
	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane %	Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
South Exit: RTE W Merge Type: Not Applied												
Full Length Lane	1											Merge Analysis not applied.
East Exit: SOUTH ST Merge Type: Not Applied												
Full Length Lane	1											Merge Analysis not applied.
North Exit: SALERS Merge Type: Not Applied												
Full Length Lane	1											Merge Analysis not applied.
West Exit: SOUTH ST Merge Type: Not Applied												
Full Length Lane	1											Merge Analysis not applied.

LANE SUMMARY

 Site: 101 [2043 PM BUILD (Site Folder: General)]

New Site
Site Category: (None)
Roundabout

Lane Use and Performance													
	DEMAND FLOWS		Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% BACK OF QUEUE		Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
	[Total veh/h	HV] %						[Veh	Dist] ft				
South: RTE W													
Lane 1 ^d	140	3.0	659	0.213	100	8.0	LOS A	0.9	22.1	Full	1600	0.0	0.0
Approach	140	3.0		0.213		8.0	LOS A	0.9	22.1				
East: SOUTH ST													
Lane 1 ^d	428	3.0	1174	0.365	100	6.6	LOS A	2.1	54.1	Full	1600	0.0	0.0
Approach	428	3.0		0.365		6.6	LOS A	2.1	54.1				
North: SALERS													
Lane 1 ^d	10	3.0	755	0.013	100	4.9	LOS A	0.0	1.2	Full	1600	0.0	0.0
Approach	10	3.0		0.013		4.9	LOS A	0.0	1.2				
West: SOUTH ST													
Lane 1 ^d	900	3.0	1311	0.686	100	12.0	LOS B	8.0	205.3	Full	1600	0.0	0.0
Approach	900	3.0		0.686		12.0	LOS B	8.0	205.3				
Intersection	1478	3.0		0.686		10.0	LOS A	8.0	205.3				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Geometric Delay is not included).

Queue Model: HCM Queue Formula.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

^d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)											
South: RTE W											
Mov.	L2	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov.	Ov. Lane
From S						Cap. veh/h	v/c	%	%		No.
To Exit:	W	N	E								
Lane 1	122	2	16	140	3.0	659	0.213	100	NA	NA	
Approach	122	2	16	140	3.0		0.213				
East: SOUTH ST											
Mov.	L2	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov.	Ov. Lane
From E						Cap. veh/h	v/c	%	%		No.
To Exit:	S	W	N								
Lane 1	17	407	4	428	3.0	1174	0.365	100	NA	NA	
Approach	17	407	4	428	3.0		0.365				

North: SALERS											
Mov.	L2	T1	R2	Total	%HV		Deg.	Lane	Prob.	Ov.	
From N						Cap.	Satn	Util.	SL	Ov.	Lane
To Exit:	E	S	W			veh/h	v/c	%	%		No.
Lane 1	2	1	7	10	3.0	755	0.013	100	NA	NA	
Approach	2	1	7	10	3.0		0.013				
West: SOUTH ST											
Mov.	L2	T1	R2	Total	%HV		Deg.	Lane	Prob.	Ov.	
From W						Cap.	Satn	Util.	SL	Ov.	Lane
To Exit:	N	E	S			veh/h	v/c	%	%		No.
Lane 1	2	671	227	900	3.0	1311	0.686	100	NA	NA	
Approach	2	671	227	900	3.0		0.686				
Total %HV Deg.Satn (v/c)											
Intersection	1478	3.0		0.686							

Lane flow rates given in this report are based on the arrival flow rates subject to upstream capacity constraint where applicable.

Merge Analysis												
	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane % veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec	
South Exit: RTE W Merge Type: Not Applied												
Full Length Lane	1	Merge Analysis not applied.										
East Exit: SOUTH ST Merge Type: Not Applied												
Full Length Lane	1	Merge Analysis not applied.										
North Exit: SALERS Merge Type: Not Applied												
Full Length Lane	1	Merge Analysis not applied.										
West Exit: SOUTH ST Merge Type: Not Applied												
Full Length Lane	1	Merge Analysis not applied.										

LANE SUMMARY

 Site: 101 [2043 WE BUILD (Site Folder: General)]

New Site
Site Category: (None)
Roundabout

Lane Use and Performance													
	DEMAND FLOWS		Cap.	Deg. Satn	Lane Util.	Aver. Delay	Level of Service	95% BACK OF QUEUE		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	[Total	HV]						[Veh	Dist]				
	veh/h	%	veh/h	v/c	%	sec					ft	%	%
South: RTE W													
Lane 1 ^d	145	3.0	871	0.166	100	5.8	LOS A	0.7	18.1	Full	1600	0.0	0.0
Approach	145	3.0		0.166		5.8	LOS A	0.7	18.1				
East: SOUTH ST													
Lane 1 ^d	510	3.0	1171	0.435	100	7.6	LOS A	2.8	70.6	Full	1600	0.0	0.0
Approach	510	3.0		0.435		7.6	LOS A	2.8	70.6				
North: SALERS													
Lane 1 ^d	8	3.0	700	0.011	100	5.3	LOS A	0.0	1.0	Full	1600	0.0	0.0
Approach	8	3.0		0.011		5.3	LOS A	0.0	1.0				
West: SOUTH ST													
Lane 1 ^d	512	3.0	1326	0.386	100	6.3	LOS A	2.5	63.9	Full	1600	0.0	0.0
Approach	512	3.0		0.386		6.3	LOS A	2.5	63.9				
Intersection	1174	3.0		0.435		6.8	LOS A	2.8	70.6				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Geometric Delay is not included).

Queue Model: HCM Queue Formula.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

^d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)											
South: RTE W											
Mov.	L2	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL Ov.	Ov. Lane No.	
From S To Exit:	W	N	E			Cap. veh/h	v/c	%	%		
Lane 1	123	1	21	145	3.0	871	0.166	100	NA	NA	
Approach	123	1	21	145	3.0		0.166				
East: SOUTH ST											
Mov.	L2	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL Ov.	Ov. Lane No.	
From E To Exit:	S	W	N			Cap. veh/h	v/c	%	%		
Lane 1	7	488	15	510	3.0	1171	0.435	100	NA	NA	
Approach	7	488	15	510	3.0		0.435				

North: SALERS											
Mov.	L2	T1	R2	Total	%HV		Deg.	Lane	Prob.	Ov.	
From N						Cap.	Satn	Util.	SL	Ov.	Lane
To Exit:	E	S	W			veh/h	v/c	%	%	%	No.
Lane 1	2	1	4	8	3.0	700	0.011	100	NA	NA	
Approach	2	1	4	8	3.0		0.011				
West: SOUTH ST											
Mov.	L2	T1	R2	Total	%HV		Deg.	Lane	Prob.	Ov.	
From W						Cap.	Satn	Util.	SL	Ov.	Lane
To Exit:	N	E	S			veh/h	v/c	%	%	%	No.
Lane 1	4	403	104	512	3.0	1326	0.386	100	NA	NA	
Approach	4	403	104	512	3.0		0.386				
Total %HV Deg.Satn (v/c)											
Intersection	1174	3.0		0.435							

Lane flow rates given in this report are based on the arrival flow rates subject to upstream capacity constraint where applicable.

Merge Analysis												
	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane % veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec	
South Exit: RTE W Merge Type: Not Applied												
Full Length Lane	1	Merge Analysis not applied.										
East Exit: SOUTH ST Merge Type: Not Applied												
Full Length Lane	1	Merge Analysis not applied.										
North Exit: SALERS Merge Type: Not Applied												
Full Length Lane	1	Merge Analysis not applied.										
West Exit: SOUTH ST Merge Type: Not Applied												
Full Length Lane	1	Merge Analysis not applied.										

Appendix C

Traffic Signal Warrants

Signal Warrant Study

Roadway Characteristics

	Roadway	Orientation	Moving Lanes (One Way)	Date
Mainline	South Street	East-West	2+	12/20/2021
Cross Roadway	15th Street	North-South	1	

Does the posted speed limit on the major street exceed 40 MPH?	YES	Does the intersection lie within the built-up area of an isolated community having a population less than 10,000 people?	NO
--	-----	--	----

Warrant Summary

		Meets
Warrant #1	Eight-Hour Vehicular Volume	YES
Warrant #2	Four-Hour Vehicular Volume	YES
Warrant #3	Peak Hour	NO
Warrant #4	Pedestrian Volume	NO
Warrant #5	School Crossing	NO
Warrant #6	Coordinated Signal System	NO
Warrant #7	Crash Experience	NO
Warrant #8	Roadway Network	NO
Warrant #9	Intersection Near a Grade Crossing	NO

Fill out fields highlighted in TAN

NOTE: This spreadsheet is configured for whole hour counts (not 15 minute counts)

Adjust traffic counts using Right-Turn Reduction Factors

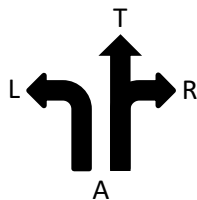
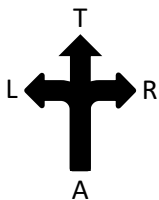
Raw Traffic Counts

Hour	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
6:00 AM	1	216	11	4	678	2	67	0	16	0	0	0
7:00 AM	0	505	22	18	1097	8	70	0	22	0	0	0
8:00 AM	9	473	37	27	906	22	59	2	32	1	0	5
9:00 AM	7	432	31	9	656	22	42	2	24	7	1	7
10:00 AM	30	492	35	16	597	9	32	5	20	7	0	24
11:00 AM	40	535	44	22	597	47	32	5	20	14	1	31
12:00 PM	36	675	48	18	639	35	53	1	19	17	0	39
1:00 PM	25	691	44	16	605	29	40	4	24	11	3	29
2:00 PM	26	692	56	23	577	30	46	2	21	13	2	29
3:00 PM	27	831	73	15	717	27	37	1	22	12	0	27
4:00 PM	32	1011	101	28	793	37	55	2	21	11	2	42
5:00 PM	28	1132	127	35	735	44	50	3	31	20	0	27

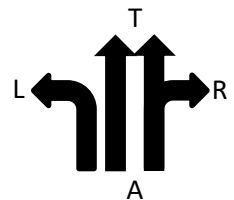
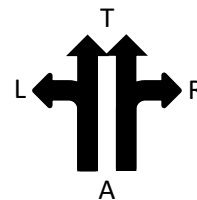
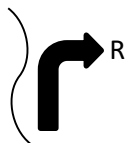
IDOT D1 Right-Turn Reduction

Hour	Critical Minor Approach				Configuration Reduction		Mainline Congestion Reduction		
	Dir	"L"	"T"	"R"	Reduce By	New "R"	Mainline Volume	Reduce By	New "R"
6:00 AM	NB	67	0	16	0%	16	216	0%	16
7:00 AM	NB	70	0	22	0%	22	505	10%	20
8:00 AM	NB	59	2	32	25%	24	473	5%	23
9:00 AM	NB	42	2	24	25%	18	432	5%	17
10:00 AM	NB	32	5	20	25%	15	492	5%	14
11:00 AM	NB	32	5	20	25%	15	535	10%	14
12:00 PM	NB	53	1	19	25%	14	675	15%	12
1:00 PM	NB	40	4	24	25%	18	691	15%	15
2:00 PM	NB	46	2	21	25%	16	692	15%	14
3:00 PM	NB	37	1	22	25%	17	831	25%	13
4:00 PM	NB	55	2	21	25%	16	1011	35%	10
5:00 PM	NB	50	3	31	25%	23	1132	40%	14

Select lane configuration:



Any configuration with exclusive right-turn lane (usually ≥ 600 feet)



Configuration: 2

Adjusted Traffic Counts

Hour	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
6:00 AM	1	216	11	4	678	2	67	0	16	0	0	0
7:00 AM	0	505	22	18	1097	8	70	0	20	0	0	0
8:00 AM	9	473	37	27	906	22	59	2	23	1	0	5
9:00 AM	7	432	31	9	656	22	42	2	17	7	1	7
10:00 AM	30	492	35	16	597	9	32	5	14	7	0	24
11:00 AM	40	535	44	22	597	47	32	5	14	14	1	31
12:00 PM	36	675	48	18	639	35	53	1	12	17	0	39
1:00 PM	25	691	44	16	605	29	40	4	15	11	3	29
2:00 PM	26	692	56	23	577	30	46	2	14	13	2	29
3:00 PM	27	831	73	15	717	27	37	1	13	12	0	27
4:00 PM	32	1011	101	28	793	37	55	2	10	11	2	42
5:00 PM	28	1132	127	35	735	44	50	3	14	20	0	27

Warrant #1 -- Eight Hour Traffic Counts
Meets Warrant
YES

Vehicles Per Hour Thresholds		Stand-Alone				Combination			
Number of Lanes		Condition A		Condition B		Condition A		Condition B	
Major Street	Major Street	Major	Minor	Major	Minor	Major	Minor	Major	Minor
2+	1	420	105	630	53	336	84	504	42

Hour	Major (2-Way)	Hi Minor (1-Way)	Stand-Alone (either or)			Combination (both)		
			Condition A	Condition B	Meets	Condition A	Condition B	Meets
6:00 AM	912	83	No	Yes	Y	No	Yes	N
7:00 AM	1650	90	No	Yes	Y	Yes	Yes	Y
8:00 AM	1474	84	No	Yes	Y	Yes	Yes	Y
9:00 AM	1157	61	No	Yes	Y	No	Yes	N
10:00 AM	1179	51	No	No	N	No	Yes	N
11:00 AM	1285	51	No	No	N	No	Yes	N
12:00 PM	1451	66	No	Yes	Y	No	Yes	N
1:00 PM	1410	59	No	Yes	Y	No	Yes	N
2:00 PM	1404	62	No	Yes	Y	No	Yes	N
3:00 PM	1690	51	No	No	N	No	Yes	N
4:00 PM	2002	67	No	Yes	Y	No	Yes	N
5:00 PM	2101	67	No	Yes	Y	No	Yes	N
Does Stand-Alone or Combination meet thresholds for 8 total hours?					YES	NO		

Warrant #2 -- Four Hour Traffic Counts

Meets Warrant

YES

Appropriate table to use from MUTCD (2009)	4C-2
Number of moving lanes on major street (one-way)	2+
Number of moving lanes on minor approach (one-way)	1

Hour	Major (2-Way)	Hi Minor (1-Way)	Plot above line?
6:00 AM	912	83	Y
7:00 AM	1650	90	Y
8:00 AM	1474	84	Y
9:00 AM	1157	61	Y
10:00 AM	1179	51	N
11:00 AM	1285	51	N
12:00 PM	1451	66	Y
1:00 PM	1410	59	N
2:00 PM	1404	62	Y
3:00 PM	1690	51	N
4:00 PM	2002	67	Y
5:00 PM	2101	67	Y

Do at least four hours meet the threshold?

YES

Warrant #3 -- Peak Hour Volume

Meets Warrant

NO

Appropriate table to use from MUTCD (2009)	4C-4
Number of moving lanes on major street (one-way)	2+
Number of moving lanes on minor approach (one-way)	1

Hour	Major (2-Way)	Hi Minor (1-Way)	Plot above line?
6:00 AM	912	83	N
7:00 AM	1650	90	Y
8:00 AM	1474	84	Y
9:00 AM	1157	61	N
10:00 AM	1179	51	N
11:00 AM	1285	51	N
12:00 PM	1451	66	N
1:00 PM	1410	59	N
2:00 PM	1404	62	N
3:00 PM	1690	51	N
4:00 PM	2002	67	N
5:00 PM	2101	67	N

Does at least one hour meet the threshold?

YES

Note:

This warrant shall only be applied in unusual cases. Such as the following:

- Office Complexes
- Manufacturing Plants
- Industrial Complexes
- High-Occupancy Vehicle Facilities

Do any unusual cases exist?

NO

Warrant #4 -- Pedestrian Volume

Meets Warrant

NO**Four Hour**

Appropriate table to use from MUTCD (2009), Four Hour Analysis	4C-6
Appropriate table to use from MUTCD (2009), Peak Hour Analysis	4C-8
Number of moving lanes on major street (one-way)	2+
Number of moving lanes on minor approach (one-way)	1

Hour	Major (2-Way)	Peds Crossing Major Street	Plot above line in Figure 4C-6?	Plot above line in Figure 4C-8?
6:00 AM	912			
7:00 AM	1650			
8:00 AM	1474			
9:00 AM	1157			
10:00 AM	1179			
11:00 AM	1285			
12:00 PM	1451			
1:00 PM	1410			
2:00 PM	1404			
3:00 PM	1690			
4:00 PM	2002			
5:00 PM	2101			

Do at least four hours meet threshold for Figure 4C-6?

NO

Does one hour meet threshold for Figure 4C-8?

NO

*Assuming 90% of peds cross major street

Warrant #5 -- School Crossing

Meets Warrant

NO

If both questions are "Yes", then the warrant is met.

Do at least 20 school children cross the major street during the highest crossing hour?	NO
Has an engineering study shown that the number of gaps when school children are crossing is less than the number of minutes that school children are present?	NO

Warrant #6 -- Coordinated Signal System

Meets Warrant

NO

If one statement is marked "Yes", then the warrant is met.

On a one-way street or a street that has traffic predominately in one direction, the adjacent traffic control signals are so far apart that they do not provide the necessary degree of vehicular platooning.	NO
On a two-way street, adjacent traffic control signals does not provide the necessary degree of platooning and the proposed and adjacent traffic control signals will collectively provide a progressive operation.	NO

Warrant #7 -- Crash Experience**Meets Warrant****NO**

If all statements are marked "Yes", then the warrant is met.

Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce the crash frequency	NO
Five or more reported crashes, of types susceptible to correction by a traffic control signal, have occurred within a 12-month period, each crash involving personal injury or property damage apparently exceeding the applicable requirements for a reportable crash	NO
For each of any 8 hours of an average day, the vehicles per hour (vph) given in both of the 80 percent columns* of Condition A in Table 4C-1, or the vph in both of the 80 percent columns* of Condition B in Table 4C-1 exists on the major street and the higher-volume minor street approach, respectively, to the intersection, or the volume of pedestrian traffic is not less than 80 percent of the requirements specified in the Pedestrian Volume warrant. These major street and minor street volumes shall be for the same 8 hours. On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours.	NO

* Substitute 56% column for major street speed limits greater than 40 mph or if located in built-up areas of isolated towns with a population less than 10,000 people.

Warrant #8 -- Roadway Network**Meets Warrant****NO**

If any of the statements are marked "Yes", and the roads qualify as a major route, then the warrant is met.

The intersection has a total existing, or immediately projected, entering volume of at least 1,000 vehicles per hour during the peak hour of a typical weekday and has 5-year projected traffic volumes, based on an engineering study, that meet one or more of Warrants 1, 2 and 3 during an average weekday; or	YES
The intersection has a total existing or immediately projected entering volume of at least 1,000 vehicles per hour for each of any 5 hours of a non-normal business day (Saturday or Sunday).	YES

A major route as used in this signal warrant shall have at least one of the following criteria:

	South Street	15th Street
It is part of the street or highway system that serves as the principal roadway network for through traffic flow.	YES	NO
It includes rural or suburban highways outside, entering or traversing a city.	NO	NO
It appears as a major route on an official plan, such as a major street plan in an urban area traffic and transportation study.	YES	NO

Warrant #9 -- Intersection Near a Grade Crossing**Meets Warrant****NO**

If all statements are marked "Yes", then the warrant is met.

A grade crossing exists on an approach controlled by a STOP or YIELD sign and the center of the track nearest to the intersection is within 140 feet of the stop line or yield line on the approach; and	NO
During the highest traffic volume hour during which rail traffic uses the crossing, the plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the minor-street approach that crosses the track (one direction only, approaching the intersection) falls above the applicable curve in Figure 4C-9 or 4C-10 for the existing combination of approach lanes over the track and the distance D, which the clear storage distance as defined in Section 1A.13.	NO

Signal Warrant Study

Roadway Characteristics

	Roadway	Orientation	Moving Lanes (One Way)	Date
Mainline	South Street	East-West	1	12/20/2021
Cross Roadway	Salers Lane	North-South	1	

Does the posted speed limit on the major street exceed 40 MPH?	YES	Does the intersection lie within the built-up area of an isolated community having a population less than 10,000 people?	NO
--	-----	--	----

Warrant Summary

		Meets
Warrant #1	Eight-Hour Vehicular Volume	YES
Warrant #2	Four-Hour Vehicular Volume	YES
Warrant #3	Peak Hour	NO
Warrant #4	Pedestrian Volume	NO
Warrant #5	School Crossing	NO
Warrant #6	Coordinated Signal System	NO
Warrant #7	Crash Experience	NO
Warrant #8	Roadway Network	NO
Warrant #9	Intersection Near a Grade Crossing	NO

Fill out fields highlighted in TAN

NOTE: This spreadsheet is configured for whole hour counts (not 15 minute counts)

Adjust traffic counts using Right-Turn Reduction Factors

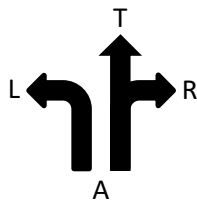
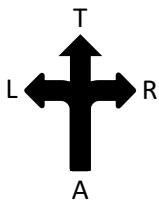
Raw Traffic Counts

Hour	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
6:00 AM	6	96	18	7	323	3	113	0	6	1	0	2
7:00 AM	17	176	39	16	454	4	155	26	18	4	2	5
8:00 AM	10	161	44	8	333	3	101	22	15	5	14	22
9:00 AM	7	166	50	10	268	1	63	3	20	1	0	6
10:00 AM	3	200	54	9	263	0	72	3	6	0	2	0
11:00 AM	2	272	47	7	276	4	69	1	10	1	2	6
12:00 PM	5	271	87	11	275	1	64	1	13	1	3	3
1:00 PM	7	285	70	8	254	0	66	1	17	3	1	0
2:00 PM	7	346	86	16	262	2	68	1	10	1	2	4
3:00 PM	26	341	103	21	302	1	59	12	16	0	19	15
4:00 PM	3	446	150	14	298	3	83	5	18	4	7	15
5:00 PM	2	461	155	12	275	2	91	1	9	2	3	10

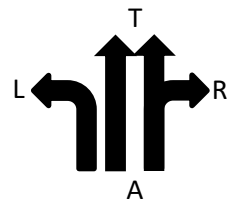
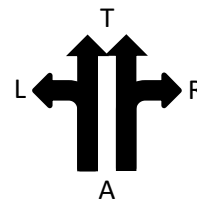
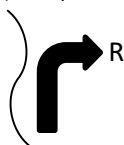
Right-Turn Reduction

Hour	Critical Minor Approach				Configuration Reduction		Mainline Congestion Reduction		
	Dir	"L"	"T"	"R"	Reduce By	New "R"	Mainline Volume	Reduce By	New "R"
6:00 AM	NB	113	0	6	0%	6	96	0%	6
7:00 AM	NB	155	26	18	0%	18	176	0%	18
8:00 AM	NB	101	22	15	0%	15	161	0%	15
9:00 AM	NB	63	3	20	0%	20	166	0%	20
10:00 AM	NB	72	3	6	0%	6	200	0%	6
11:00 AM	NB	69	1	10	0%	10	272	0%	10
12:00 PM	NB	64	1	13	0%	13	271	0%	13
1:00 PM	NB	66	1	17	0%	17	285	0%	17
2:00 PM	NB	68	1	10	0%	10	346	0%	10
3:00 PM	NB	59	12	16	0%	16	341	0%	16
4:00 PM	NB	83	5	18	0%	18	446	5%	17
5:00 PM	NB	91	1	9	0%	9	461	5%	9

Select lane configuration:



Any configuration with exclusive right-turn lane (usually ≥ 600 feet)



Configuration: 2

Adjusted Traffic Counts

Hour	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
6:00 AM	6	96	18	7	323	3	113	0	6	1	0	2
7:00 AM	17	176	39	16	454	4	155	26	18	4	2	5
8:00 AM	10	161	44	8	333	3	101	22	15	5	14	22
9:00 AM	7	166	50	10	268	1	63	3	20	1	0	6
10:00 AM	3	200	54	9	263	0	72	3	6	0	2	0
11:00 AM	2	272	47	7	276	4	69	1	10	1	2	6
12:00 PM	5	271	87	11	275	1	64	1	13	1	3	3
1:00 PM	7	285	70	8	254	0	66	1	17	3	1	0
2:00 PM	7	346	86	16	262	2	68	1	10	1	2	4
3:00 PM	26	341	103	21	302	1	59	12	16	0	19	15
4:00 PM	3	446	150	14	298	3	83	5	17	4	7	15
5:00 PM	2	461	155	12	275	2	91	1	9	2	3	10

Warrant #1 -- Eight Hour Traffic Counts

Meets Warrant

YES

Vehicles Per Hour Thresholds		Stand-Alone				Combination			
Number of Lanes		Condition A		Condition B		Condition A		Condition B	
Major Street	Major Street	Major	Minor	Major	Minor	Major	Minor	Major	Minor
1	1	350	105	525	53	280	84	420	42

Hour	Major (2-Way)	Hi Minor (1-Way)	Stand-Alone (either or)			Combination (both)		
			Condition A	Condition B	Meets	Condition A	Condition B	Meets
6:00 AM	453	119	Yes	No	Y	Yes	Yes	Y
7:00 AM	706	199	Yes	Yes	Y	Yes	Yes	Y
8:00 AM	559	138	Yes	Yes	Y	Yes	Yes	Y
9:00 AM	502	86	No	No	N	Yes	Yes	Y
10:00 AM	529	81	No	Yes	Y	No	Yes	N
11:00 AM	608	80	No	Yes	Y	No	Yes	N
12:00 PM	650	78	No	Yes	Y	No	Yes	N
1:00 PM	624	84	No	Yes	Y	Yes	Yes	Y
2:00 PM	719	79	No	Yes	Y	No	Yes	N
3:00 PM	794	87	No	Yes	Y	Yes	Yes	Y
4:00 PM	914	105	Yes	Yes	Y	Yes	Yes	Y
5:00 PM	907	101	No	Yes	Y	Yes	Yes	Y
Does Stand-Alone or Combination meet thresholds for 8 total hours?					YES			YES

Appropriate table to use from MUTCD (2009)	4C-2
Number of moving lanes on major street (one-way)	1
Number of moving lanes on minor approach (one-way)	1

Hour	Major (2-Way)	Hi Minor (1-Way)	Plot above line?
6:00 AM	453	119	N
7:00 AM	706	199	Y
8:00 AM	559	138	Y
9:00 AM	502	86	N
10:00 AM	529	81	N
11:00 AM	608	80	N
12:00 PM	650	78	N
1:00 PM	624	84	N
2:00 PM	719	79	Y
3:00 PM	794	87	Y
4:00 PM	914	105	Y
5:00 PM	907	101	Y

Do at least four hours meet the threshold?

YES

Appropriate table to use from MUTCD (2009)	4C-4
Number of moving lanes on major street (one-way)	1
Number of moving lanes on minor approach (one-way)	1

Hour	Major (2-Way)	Hi Minor (1-Way)	Plot above line?
6:00 AM	453	119	N
7:00 AM	706	199	Y
8:00 AM	559	138	N
9:00 AM	502	86	N
10:00 AM	529	81	N
11:00 AM	608	80	N
12:00 PM	650	78	N
1:00 PM	624	84	N
2:00 PM	719	79	N
3:00 PM	794	87	N
4:00 PM	914	105	Y
5:00 PM	907	101	Y

Does at least one hour meet the threshold?

YES

Note:

This warrant shall only be applied in unusual cases. Such as the following:

- Office Complexes
- Manufacturing Plants
- Industrial Complexes
- High-Occupancy Vehicle Facilities

Do any unusual cases exist?

NO

Warrant #4 -- Pedestrian Volume

Meets Warrant

NO**Four Hour**

Appropriate table to use from MUTCD (2009), Four Hour Analysis	4C-6
Appropriate table to use from MUTCD (2009), Peak Hour Analysis	4C-8
Number of moving lanes on major street (one-way)	1
Number of moving lanes on minor approach (one-way)	1

Hour	Major (2-Way)	Peds Crossing Major Street	Plot above line in Figure 4C-6?	Plot above line in Figure 4C-8?
6:00 AM	453			
7:00 AM	706			
8:00 AM	559			
9:00 AM	502			
10:00 AM	529			
11:00 AM	608			
12:00 PM	650			
1:00 PM	624			
2:00 PM	719			
3:00 PM	794			
4:00 PM	914			
5:00 PM	907			

Do at least four hours meet threshold for Figure 4C-6?

NO

Does one hour meet threshold for Figure 4C-8?

NO

*Assuming 90% of peds cross major street

Warrant #5 -- School Crossing

Meets Warrant

NO

If both questions are "Yes", then the warrant is met.

Do at least 20 school children cross the major street during the highest crossing hour?	NO
Has an engineering study shown that the number of gaps when school children are crossing is less than the number of minutes that school children are present?	NO

Warrant #6 -- Coordinated Signal System

Meets Warrant

NO

If one statement is marked "Yes", then the warrant is met.

On a one-way street or a street that has traffic predominately in one direction, the adjacent traffic control signals are so far apart that they do not provide the necessary degree of vehicular platooning.	NO
On a two-way street, adjacent traffic control signals does not provide the necessary degree of platooning and the proposed and adjacent traffic control signals will collectively provide a progressive operation.	NO

Warrant #7 -- Crash Experience**Meets Warrant****NO**

If all statements are marked "Yes", then the warrant is met.

Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce the crash frequency	NO
Five or more reported crashes, of types susceptible to correction by a traffic control signal, have occurred within a 12-month period, each crash involving personal injury or property damage apparently exceeding the applicable requirements for a reportable crash	NO
For each of any 8 hours of an average day, the vehicles per hour (vph) given in both of the 80 percent columns* of Condition A in Table 4C-1, or the vph in both of the 80 percent columns* of Condition B in Table 4C-1 exists on the major street and the higher-volume minor street approach, respectively, to the intersection, or the volume of pedestrian traffic is not less than 80 percent of the requirements specified in the Pedestrian Volume warrant. These major street and minor street volumes shall be for the same 8 hours. On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours.	NO

* Substitute 56% column for major street speed limits greater than 40 mph or if located in built-up areas of isolated towns with a population less than 10,000 people.

Warrant #8 -- Roadway Network**Meets Warrant****NO**

If any of the statements are marked "Yes", and the roads qualify as a major route, then the warrant is met.

The intersection has a total existing, or immediately projected, entering volume of at least 1,000 vehicles per hour during the peak hour of a typical weekday and has 5-year projected traffic volumes, based on an engineering study, that meet one or more of Warrants 1, 2 and 3 during an average weekday; or	YES
The intersection has a total existing or immediately projected entering volume of at least 1,000 vehicles per hour for each of any 5 hours of a non-normal business day (Saturday or Sunday).	YES

A major route as used in this signal warrant shall have at least one of the following criteria:

	South Street	Salers Lane
It is part of the street or highway system that serves as the principal roadway network for through traffic flow.	YES	NO
It includes rural or suburban highways outside, entering or traversing a city.	NO	NO
It appears as a major route on an official plan, such as a major street plan in an urban area traffic and transportation study.	YES	NO

Warrant #9 -- Intersection Near a Grade Crossing**Meets Warrant****NO**

If all statements are marked "Yes", then the warrant is met.

A grade crossing exists on an approach controlled by a STOP or YIELD sign and the center of the track nearest to the intersection is within 140 feet of the stop line or yield line on the approach; and	NO
During the highest traffic volume hour during which rail traffic uses the crossing, the plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the minor-street approach that crosses the track (one direction only, approaching the intersection) falls above the applicable curve in Figure 4C-9 or 4C-10 for the existing combination of approach lanes over the track and the distance D, which the clear storage distance as defined in Section 1A.13.	NO

Appendix A

Traffic Volume Maps

Appendix B

Synchro Traffic Reports

Appendix C

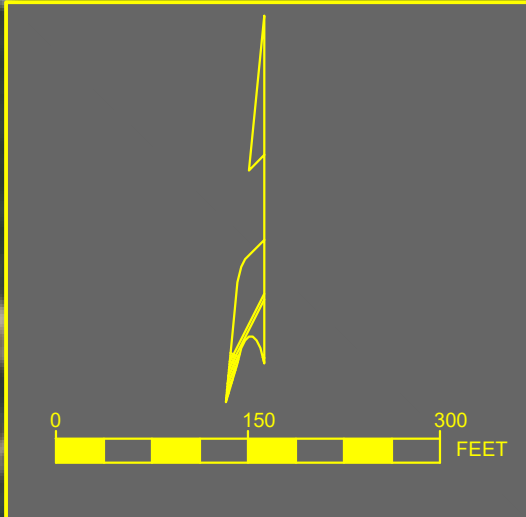
Traffic Signal Warrants

Appendix D

Conceptual Designs

LIST OF IMPROVEMENTS

- ELIMINATED SOUTHBOUND LEFT-TURN MOVEMENT FROM INTERSECTION.
- ADDED CONCRETE MEDIAN FOR CHANNELIZED RIGHT IN, RIGHT OUT, AND LEFT IN MOVEMENTS ALONG 20TH STREET NORTH OF THE INTERSECTION.



South St

W South St

S 20th St

LEGEND

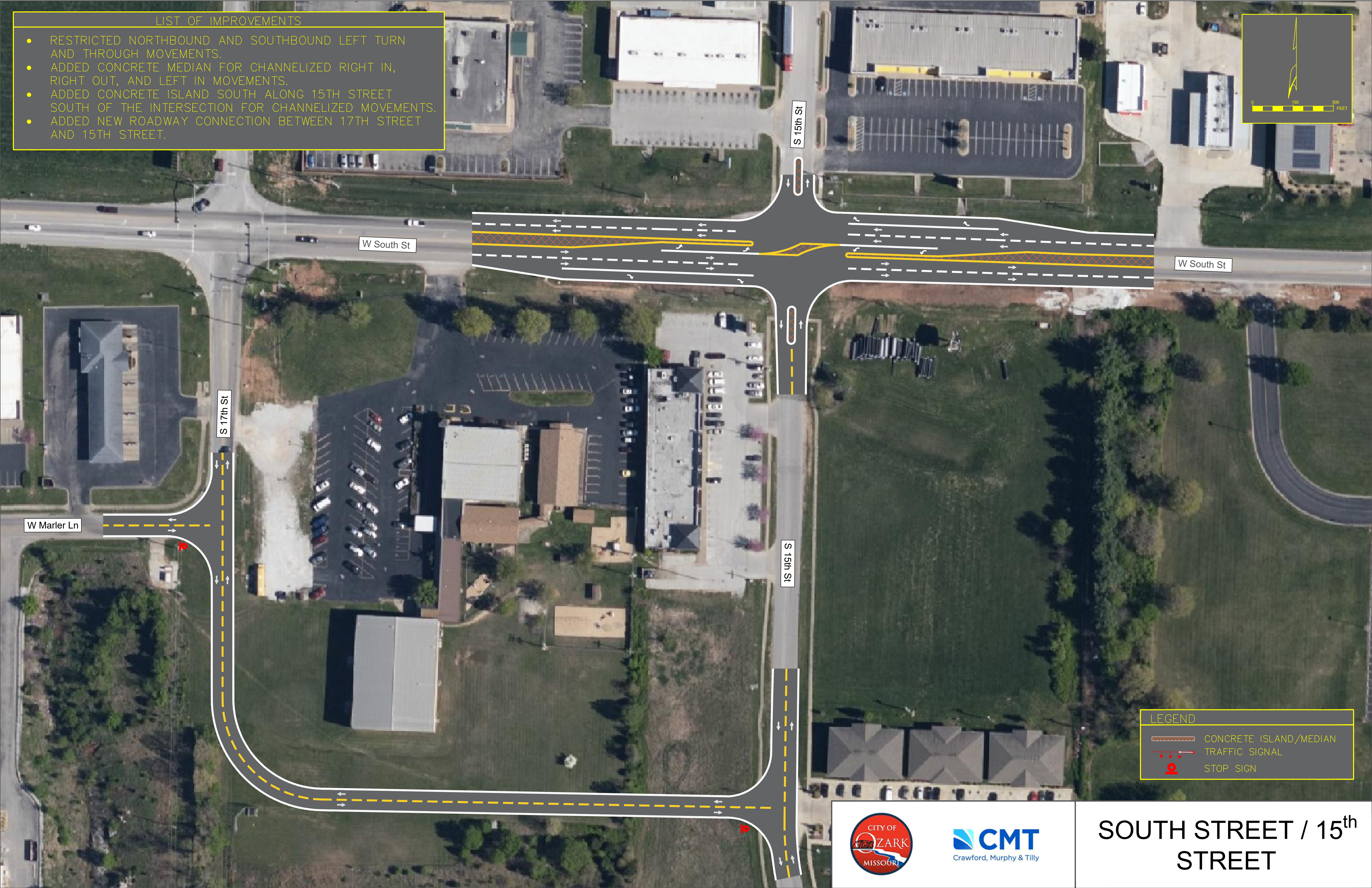
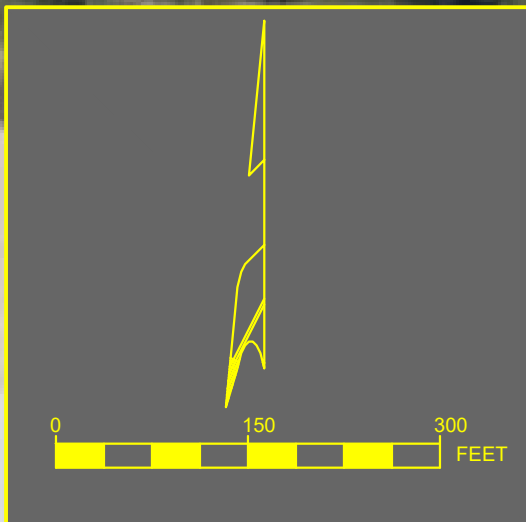
	CONCRETE ISLAND/MEDIAN
	TRAFFIC SIGNAL



SOUTH STREET / 20th STREET

LIST OF IMPROVEMENTS

- RESTRICTED NORTHBOUND AND SOUTHBOUND LEFT TURN AND THROUGH MOVEMENTS.
- ADDED CONCRETE MEDIAN FOR CHANNELIZED RIGHT IN, RIGHT OUT, AND LEFT IN MOVEMENTS.
- ADDED CONCRETE ISLAND ALONG 15TH STREET SOUTH OF THE INTERSECTION FOR CHANNELIZED MOVEMENTS.
- ADDED NEW ROADWAY CONNECTION BETWEEN 17TH STREET AND 15TH STREET.



LEGEND

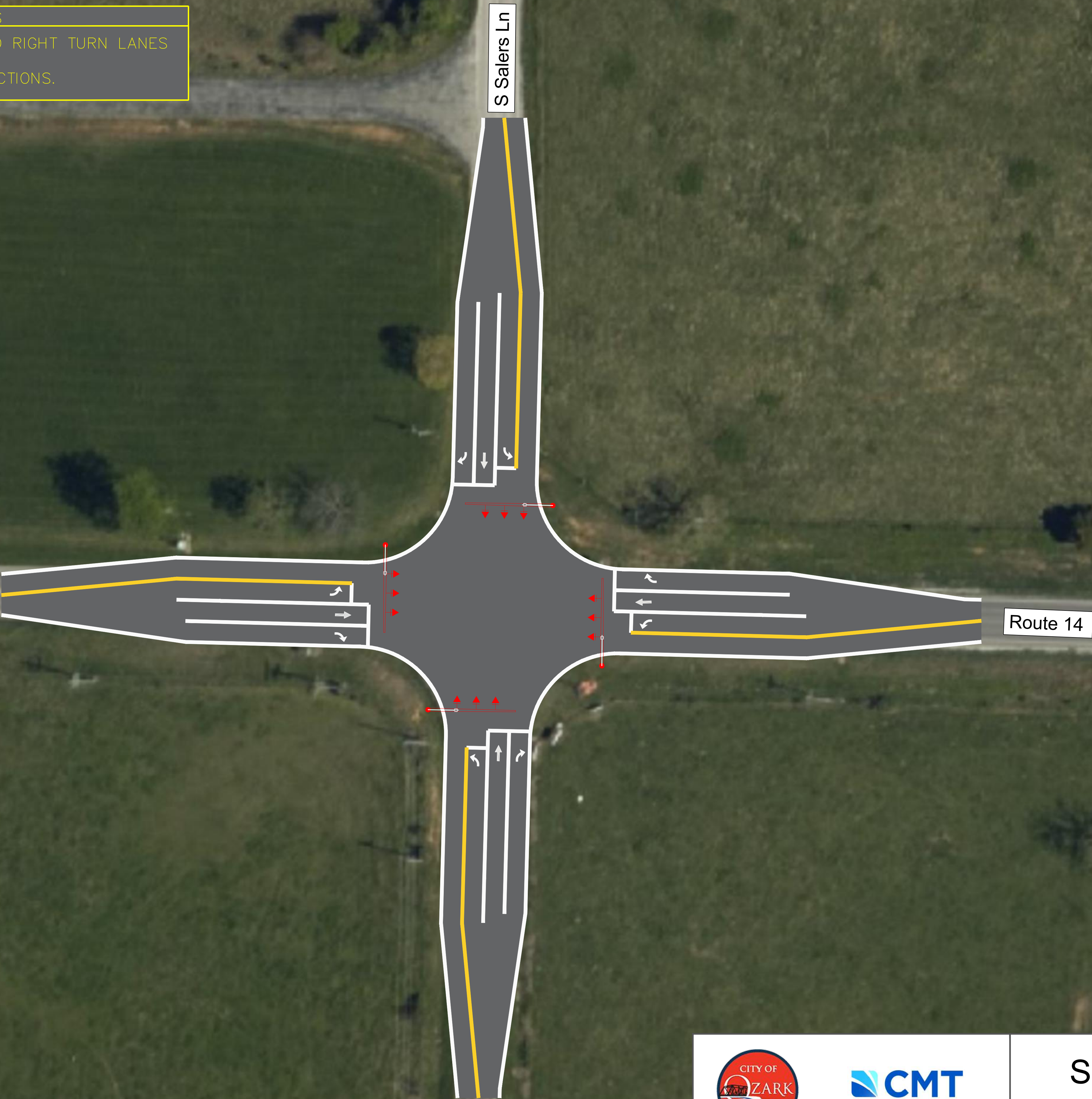
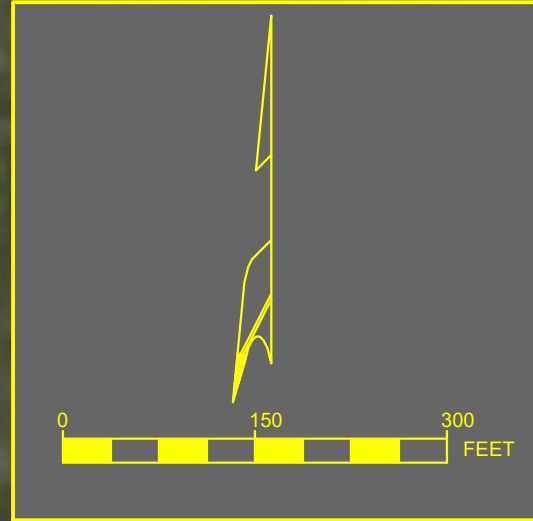
- CONCRETE ISLAND/MEDIAN
- TRAFFIC SIGNAL
- STOP SIGN



SOUTH STREET / 15th STREET

LIST OF IMPROVEMENTS

- ADDED DEDICATED LEFT, THROUGH, AND RIGHT TURN LANES FOR ALL DIRECTIONS.
- ADDED TRAFFIC SIGNALS FOR ALL DIRECTIONS.



LEGEND

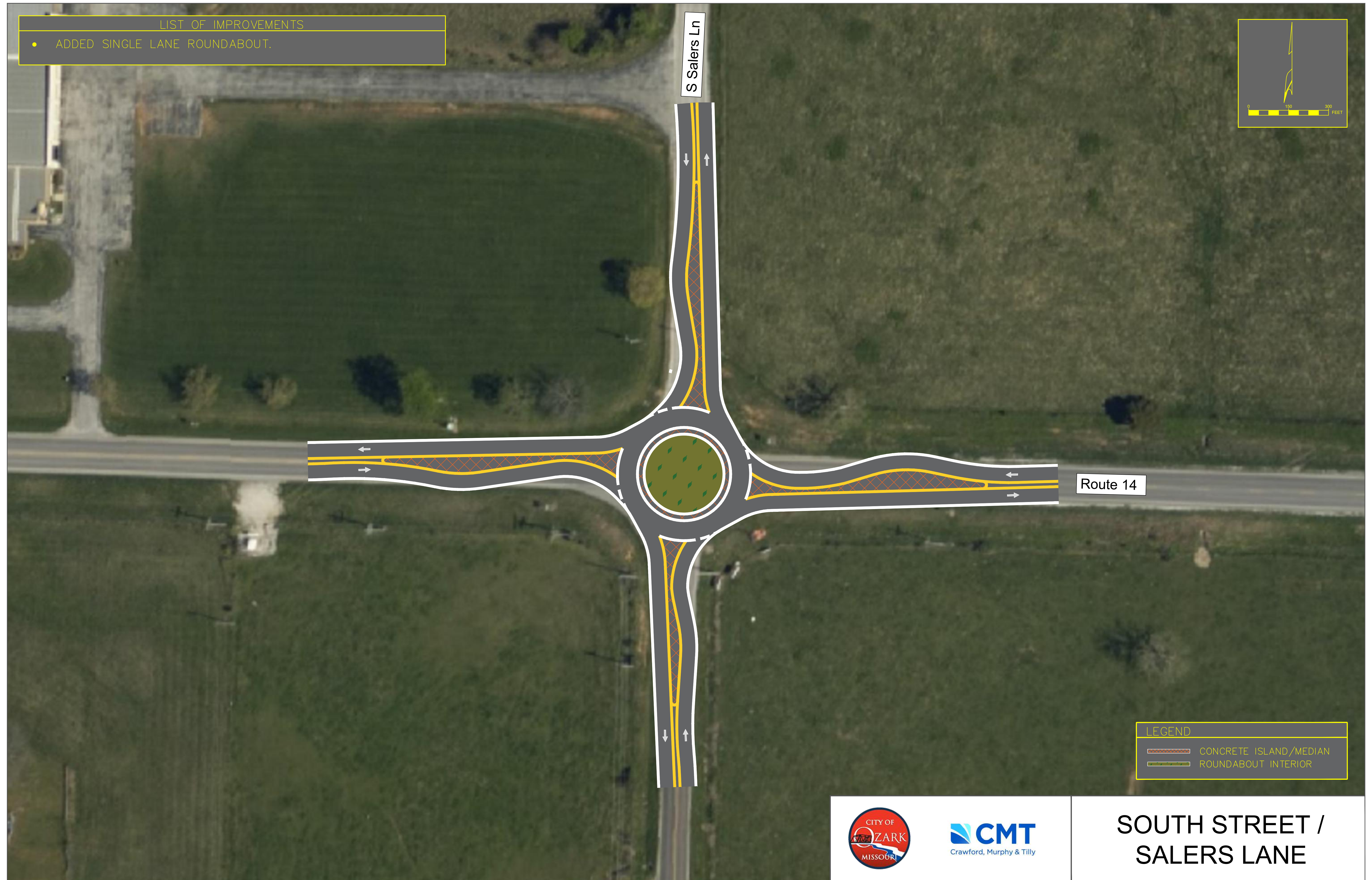
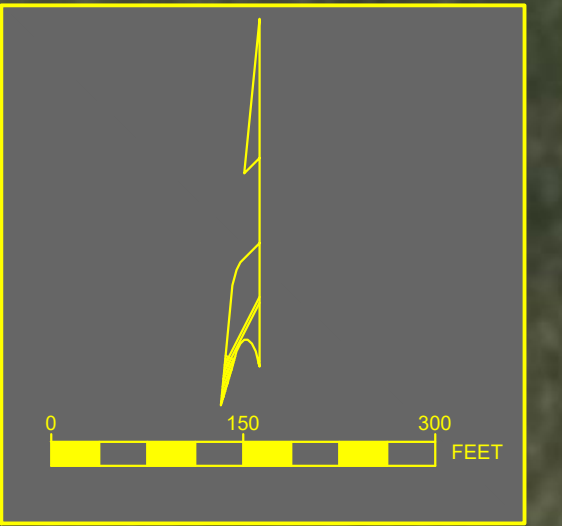
- CONCRETE ISLAND/MEDIAN
- TRAFFIC SIGNAL



SOUTH STREET /
SALERS LANE

LIST OF IMPROVEMENTS

- ADDED SINGLE LANE ROUNDABOUT.



LEGEND

- CONCRETE ISLAND/MEDIAN
- ROUNDABOUT INTERIOR



SOUTH STREET /
SALERS LANE

			OZARK SOUTH CORRIDOR TRAFFIC STUDY							
			CMT JOB # 21004106-00							
			OZARK, MO							
	ITEM	UNIT COSTS	South Street and 15 th Street		South Street and 20th Street		South Street and Salers Lane - Signalized Intersection		South Street and Salers Lane - Roundabout	
CONSTRUCTION DOLLARS (2024)	Removal of Improvements	\$200,000.00 / LS	0.75	\$150,000	0	\$0	0.75	\$150,000	0.75	\$150,000
	Unclassified Excavation	\$10.00 / CY	3000	\$30,000	0	\$0	3000	\$30,000	3000	\$30,000
	Compacting Embankment	\$5.00 / CY		\$0		\$0		\$0		\$0
	Embankment In Place	\$15.00 / CY	1,500.00	\$22,500	-	\$0	1,500.00	\$22,500	1,500.00	\$22,500
	Full Depth Pavement, 11 IN.	\$65.00 / SY	2,390.00	\$155,350	-	\$0	1,616.00	\$105,040	3,430.00	\$222,950
	A2 Shoulder	\$60.00 / SY	1,250.00	\$75,000	-	\$0	1,300.00	\$78,000	1,275.00	\$76,500
	Type 5 Agg. Base	\$9.00 / SY	3,640.00	\$32,760	-	\$0	2,916.00	\$26,244	4,705.00	\$42,345
	Type B Curb & Gutter	\$35.00 / LF	-	\$0	-	\$0	-	\$0	-	\$0
	Paved Approach, 8 IN.	\$95.00 / SY	-	\$0	-	\$0	-	\$0	-	\$0
	Concrete Sidewalk, 4 IN.	\$45.00 / SY	-	\$0	-	\$0	-	\$0	-	\$0
	8" Concrete Median (Pin On)	\$60.00 / SY	80.00	\$4,800	20.00	\$1,200	-	\$0	640.00	\$38,400
	Traffic Signals	\$250,000.00 / LS	-	\$0	-	\$0	1.00	\$250,000		\$0
	Truck Apron	\$90.00 / SY							115.00	\$10,350
	Subtotal			\$470,410		\$1,200		\$661,784		\$593,045
	Mobilization		8.0%	\$37,633		\$100		\$52,943		\$47,444
	Erosion Control		3.0%	\$14,112		\$0		\$19,854		\$17,791
	Traffic Control		8.0%	\$37,633		\$1,500		\$52,943		\$47,444
	Signing		2.0%	\$9,408		\$2,500		\$13,236		\$11,861
	Pavement Marking		1.5%	\$7,056		\$1,000		\$9,927		\$8,896
	Contractor Furnished Surveying and Staking		1.5%	\$7,056		\$0		\$9,927		\$8,896
	Subtotal			\$112,898		\$5,100		\$158,828		\$142,331
	Contingency	20%		\$116,662						
	CONSTRUCTION SUBTOTAL		Subtotal	\$699,970	Subtotal	\$6,300	Subtotal	\$820,612	Subtotal	\$735,376
			\$2,262,258							
	ESTIMATE ASSUMPTIONS & KEY NOTES		ASSUMES NO ENVIRONMENTAL MITIGATION COSTS							
			CONCEPT DESIGN PHASE WITH MANY ASSUMPTIONS							
			PROJECT SCHEDULE & INFLATION							

PROGRAM DOLLARS		South Street and 15th Street	South Street and 20th Street	South Street and Salers Lane - Signalized Intersection	South Street and Salers Lane - Roundabout
	Construction Cost	\$699,970	\$6,300	\$820,612	\$735,376
	Preliminary Engineering (11%)	\$76,997	\$756	\$98,473	\$88,245
	Construction Engineering (15%)	\$104,996	\$945	\$123,092	\$110,306
	Right of Way	\$45,000	\$0	\$180,000	\$20,000
	Right of Way Incidentals	\$30,000	\$0	\$35,000	\$10,000
	Utility Relocation Costs	\$50,000	\$0	\$50,000	\$50,000
	TOTAL	\$1,006,962.30	\$8,001.00	\$1,307,177.44	\$1,013,927.27
	PROJECT TOTALS	\$3,336,068.01			
	ESTIMATE ASSUMPTIONS & KEY NOTES	DESIGN ESTIMATE IS BASED ON CONCEPT DESIGN & CAN CHANGE BASED ON FINAL DESIGN APPROVAL			