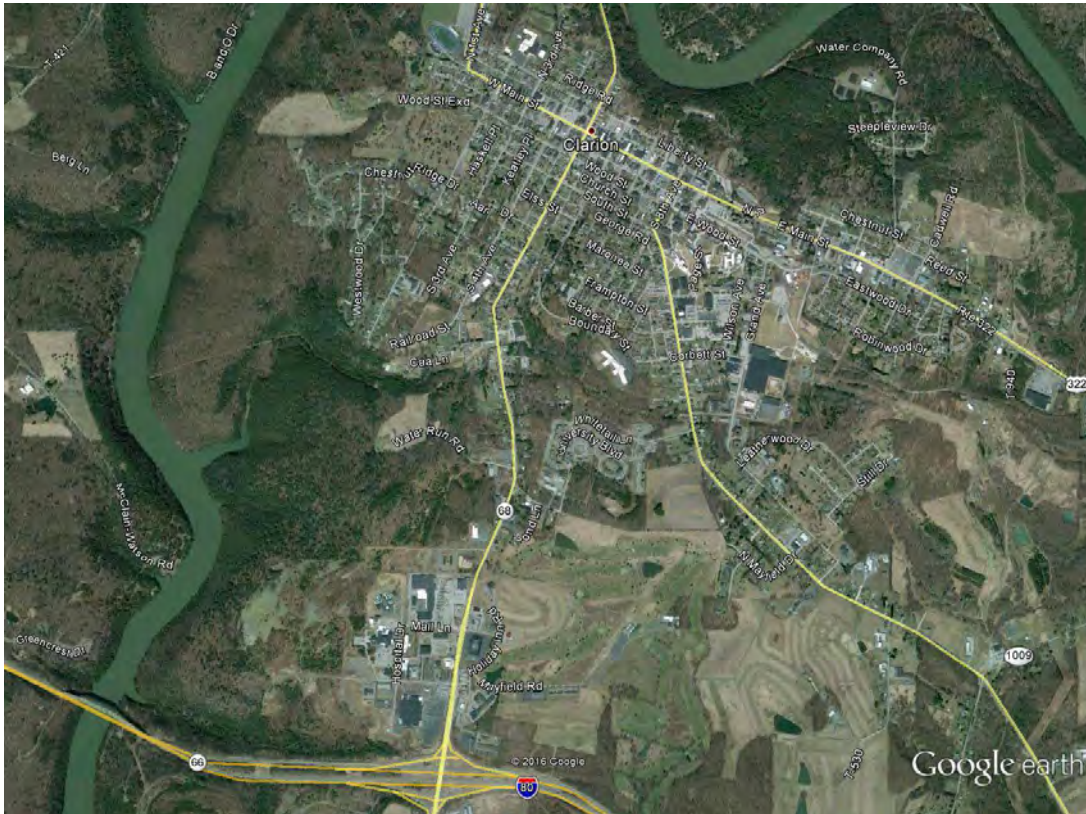


Clarion Area Relief Route Study

Appendix

Clarion, Clarion County

June 30, 2016



Prepared for:

**Northwest Commission
395 Seneca Street
Oil City, PA 16301**



Prepared by:

**AECOM
707 Grant Street, 5th Floor
Pittsburgh, PA 15219**

APPENDIX

APPENDIX A

Steering Committee Meeting Minutes



Clarion Area Relief Route Study Minutes from the Steering Committee Meeting #1

Project: Clarion Area Relief Route Study
Clarion County
AECOM Project No. 60442961

Date: Tuesday, October 6, 2015

Time: 1:00 PM

Place: Clarion County Administrative Building
Second Floor Large Conference Room
330 Main Street
Clarion, PA 16214

Purpose: Steering Committee Meeting #1

Attendees: Sue Smith – Northwest Commission
Wayne Brosius – Clarion County Commissioner
Greg Faller – Clarion County Commissioner
Kristi Ditz – Clarion County Planning
Kevin Reichard – Clarion County Planning
Doug Dupnock – PennDOT District 10-0
Carol Lapinto – Clarion Borough
Mark Hall – Clarion Borough
Bob Lewis – Monroe Township Supervisor
Keith Johnson – AECOM
Rachel Myers – AECOM

The meeting was held to introduce the Clarion Relief Study and discuss AECOM's plan and schedule for the project. Mr. Johnson (AECOM) summarized the project and AECOM's anticipated approach and schedule. During the presentation, the attendees provided additional information about the study area and offered input while following topics were discussed:

- During introductions of the present stakeholders, Mr. Brosius (Clarion County Commissioner) stated that representatives of Clarion Township were invited to this meeting but declined attending.
- While reviewing the importance of the Route 68 Corridor, several current and upcoming projects within the study area were identified including the following:

- Mr. Brosius (Clarion County Commissioner) stated that a YMCA is proposed to be located on the eastern side of Route 68 along Mayfield Road.
- Ms. Lapinto (Clarion Borough) stated that a 40-unit senior living facility is proposed to be located along the eastern side of Route 68 on the currently vacant parcel of land opposite of Franklin Street.
- Mr. Dupnock (PennDOT) stated that two PennDOT projects are currently in progress along the Route 68 corridor. First, utilities are currently being relocated in order for an existing curve along Route 68 to be realigned north of Trout Run Court. The remaining of the construction will occur next year. The second project comprises of installing traffic signal control at the intersection of Route 68 with Dolby Street.
- In discussing existing alternate routes, Mr. Johnson (AECOM) stated that University Boulevard to Bauer Road connects Greenville Pike to Route 68. Ms Lapinto (Clarion Borough) stated that Reinhard Village consists of student housing for Clarion University. Also, Clarion University owns Reinhard Village and the road accessing the student housing. Additionally, Second Avenue to Railroad Street to Meadowbrook Court to Trout Run Court also connects Main Street (SR 0322) to Route 68 but as the roads traverse through residential areas, they are not conducive to through traffic.
- While discussing the estimated truck traffic through the study area, Mr. Brosius (Clarion County Commissioner) stated that when there is an incident or construction on I-80, there is a significant volume of trucks that travel through Clarion.
- In discussing potential policy improvements, Ms. Lapinto (Clarion Borough) stated that of the municipalities included in the study, Clarion Borough is the only municipality that has a current zoning ordinance.
- During the discussion of possible strategies to improve Route 68, Ms. Lapinto (Clarion Borough) stated that pedestrian safety has been a concern in past years as several crashes involving pedestrians have been reported at the intersection of Main Street (SR 0322) with Route 68. As a result of the crashes including two fatalities involving pedestrians, the Borough would like the intersection to include an all-pedestrian phase at the traffic signal.
- Mr. Johnson (AECOM) indicated that existing transit facilities, Clarion University, and local emergency services would be contacted for their input on the study and possible strategies.
- Discussion ensued concerning potential new roadway alternatives. Mr. Reichard (Clarion County Planning) stated support for a connection from Second Avenue to Route 68, but also stated that there are current concerns with stormwater management in that area that would need to be addressed. Mr. Hall (Clarion Borough) also stated that Trout Run is the main connection for stormwater originating from the east and there has been previous deterioration in that area due to runoff.
- In discussing the anticipated meetings for the study, Ms. Smith (Northwest Commission) stated that the public should have an opportunity to be involved during the study.

Although the exact meeting for the public to be invited to will be decided in the future, all participants agreed that the public should be included.

- After the conclusion of the presentation, general discussion ensued concerning multiple topics.
- Mr. Brosius (Clarion County Commissioner) stated that there is a concern that during special events or some other occurrence (i.e. hazardous spill, crash) that completely blocks Route 68, a shutdown of I-80 would then further increase traffic through Clarion.
- Mr. Hall (Clarion Borough) stated that there has been a rumor that a road from Greenville Pike to Route 68 would be built along an existing power line right-of-way.
- Mr. Hall (Clarion Borough) stated he can provide a study that was performed around 2003 which considered acquiring property and widening Route 68 to include an additional lane and sidewalks.
- Mr. Lewis (Monroe Township Supervisor) stated that the number of driveways accessing Route 68 has been a cause of crashes and congestion in the past.
- Mr. Faller (Clarion County Commissioner) questioned if it was possible to relocate Mayfield Road so that it connects directly to BP Drive since the YMCA is proposed to be constructed along Mayfield Road. Mr. Lewis (Monroe Township Supervisor) said that although there are no current plans for that configuration, it is a possibility worth investigating.
- Mr. Lewis (Monroe Township Supervisor) stated that many years ago, property was offered free to the township in order to build a connection from the Applewood residential development to Route 68, but those plans never materialized.
- Ms. Ditz (Clarion County Planning) stated that GIS mapping is available through her office.
- Mr. Dupnock (PennDOT) stated that he has no concerns with mounting the Bluetooth boxes on the signal poles, but Melissa McFeaters with PennDOT District 10-0 should also be consulted. Mr. Hall (Clarion Borough) stated that he would be the contact person for Clarion Borough concerning the Bluetooth installation.
- Mr. Lewis (Monroe Township Supervisor) stated that in the HOP approval for the driveway for Aldi, it was agreed that if a traffic signal was installed at the intersection of Route 68 with Dolby Street, the current access to Route 68 would be closed and access would be provided via Dolby Street only.
- Mr. Brosius (Clarion County Commissioner) stated that a night meeting involving the public could be held at the Main Street Center or the Library.
- Mr. Reichard (Clarion County Planning) voiced concerns about the existing Second Avenue's change in widths and a connection to Route 68 would only increase the traffic along that local road. Mr. Hall (Clarion Borough) also stated that the Council would be voting on an ordinance which would eliminate parking on the western side of Second Avenue adjacent to the cemetery.



If you wish to discuss or revise these meeting minutes, please contact me at 412.503.4721 or via email at rachel.myers@aecom.com within five days of receiving these minutes. If I do not receive a response, I will assume you have no comments on the meeting minutes.

Sincerely,
AECOM

A handwritten signature in black ink, appearing to read "Rachel Myers".

Rachel Myers, P.E.
Traffic Engineer

Attachments: Meeting sign-in sheet

SIGN IN SHEET
CLARION AREA RELIEF ROUTE STUDY STEERING COMMITTEE MEETING
October 6, 2015

ATTEND? (Please check)	NAME	ORG	EMAIL	PHONE
✓	Sue Smith	Northwest Commission	sues@northwestpa.org	814-677-4800x131
✓	Wayne Brosius	Clarion Co. Commission	wbrosius@co.clarion.pa.us	814-226-4600 x2003
✓	Kristi Ditz	Clarion Co. Planning	kditz@co.clarion.pa.us	814-226-4000x2802
✓	Kevin Reichard	Clarion Co. Planning	kreichard@co.clarion.pa.us	814-229-7285
	Twila Rifemberrick	Clarion Co. Planning (Retired)	tdrifemberrick@windstream.net	
	Dave Cook	PennDOT D10	davcook@pa.gov	
✓	Doug Dupnock	PennDOT D10	ddupnock@pa.gov	(724) 357-2879
	Tim Jablunovsky	PennDOT D10	TJABLUNOV@pa.gov	
✓	Carol Lapinto	Clarion Borough	lapinto1@comcast.net	814-226-0657
✓	Mark Hall	Clarion Borough	chiefhall@clarionboro.org	814-226-9140 x801
✓	Bob Lewis	Monroe Township Supervisor	lslewis4@verizon.net	
	Walter Shook	Monroe Township Supervisor	wds80@windstream.net	
✓	Keith Johnson	AECOM	Keith.a.johnson@aecom.com	412-503-4553
✓	Rachel Myers	AECOM	Rachel.myers@aecom.com	412-503-4721



Clarion Area Relief Route Study Minutes from the Steering Committee Meeting #2

Project: Clarion Area Relief Route Study
Clarion County
AECOM Project No. 60442961

Date: Wednesday, March 23, 2016

Time: 10:00 AM

Place: Clarion County Administrative Building
Second Floor Large Conference Room
330 Main Street
Clarion, PA 16214

Purpose: Steering Committee Meeting #2

Attendees: Wayne Brosius – Clarion County Commissioner
Ed Heasley – Clarion County Commissioner
Kristi Ditz – Clarion County Planning
Kevin Reichard – Clarion County Planning
Dave Cook – PennDOT District 10-0
Doug Dupnock – PennDOT District 10-0
Carol Lapinto – Clarion Borough
Linda LaVan – Clarion Borough
Bob Lewis – Monroe Township Supervisor
Sherry Gilligan – Monroe Township Secretary
Keith Johnson – AECOM
Rachel Myers – AECOM

The meeting was held to summarize AECOM's data collection efforts for the Clarion Relief Study and to discuss strategies that are to be analyzed in the next phase of the project. During the presentation, the attendees provided additional information about the study area and offered input while following topics were discussed:

- Mr. Johnson (AECOM) proceeded to summarize the completed data collection and existing conditions analysis completed since the last steering committee meeting as seen in the prepared presentation.
- While reviewing the existing parcel owners in the area of the potential new access road with Second Avenue, Mr. Cook (PennDOT) questioned if a parcel history had been

performed. Mr. Johnson (AECOM) stated that only current owner information was obtained and no parcel history search was performed.

- Mr. Johnson (AECOM) opened up the discussion to consider possible relief strategies to be analyzed in the next phase of the study.
- Discussions then ensued concerning the possible new connection between Second Avenue and Clarion Hospital.
 - Mr. Lewis (Monroe Township Supervisor) questioned the width of the proposed connection. Mr. Cook (PennDOT) suggested considering a two-lane road with left turn lanes at intersections.
 - Mr. Johnson (AECOM) stated that the connection road will be aligned with as little impacts as possible to existing properties and questioned if connections to any existing roads other than the Clarion Hospital should be considered. Mr. Brosius (Clarion County Commissioner) stated that a connection to Route 68 would be desirable. Mr. Lewis (Monroe Township Supervisor) stated that a connection to Dolby Street would be logical. Everyone was in agreement.
 - Mr. Lewis (Monroe Township Supervisor) stated that any intersection along the new connector road would require appropriate intersections and improvements to the existing tie-in locations.
 - Mr. Brosius (Clarion County Commissioner) questioned approximately how many homes would need to be taken if a connection was made to Second Avenue. Mr. Johnson (AECOM) stated that property acquisition needs would be determined once the connector road alignment was established in the next phase of the study, but it is likely that at least one existing home would need to be acquired.
 - Discussion ensued concerning future development as Mr. Johnson (AECOM) stated that if the proposed connection road is constructed, there is a possibility of development occurring along the connection road.
 - Mr. Lewis (Monroe Township Supervisor) questioned if the future YMCA traffic will be incorporated into the study. Mr. Johnson (AECOM) stated that all implications of building a connection road between Second Avenue and Clarion Hospital will be considered.
- Possible strategies that can be applied to Route 68 to relieve traffic congestion in the area were discussed.
 - Mr. Johnson (AECOM) summarized the existing widening projects under construction and planned by PennDOT for Route 68.
 - The existing section of Route 68 which is currently under construction will consist of two 12-foot lanes and a 10-foot two-way left turn lane.
 - Route 68 from I-80 to the Clarion Mall area will include constructing additional through lanes.
 - Mr. Johnson (AECOM) presented several lane width options for widening Route 68.

- o Ms. Ditz (Clarion County Planning) stated that she has witnessed pedestrians walking along Route 68 with baby strollers; therefore, sidewalks on at least one side of Route 68 should be taken into consideration.
- Mr. Johnson (AECOM) questioned if Clarion Borough would be willing to consider removing on-street parking near the intersection of Main Street (SR 0322) with Route 68 in order to gain additional capacity at the intersection. Everyone agreed that the parking adjacent to that intersection is utilized and removal of the parking would not be favored by the public.
- Mr. Cook (PennDOT) questioned if any other possible connections to Route 68 have been considered. Mr. Johnson (AECOM) stated that other alternatives were discussed at the first Steering Committee Meeting, such as Reinhard Village. Ms. Lapinto (Clarion Borough) confirmed that the roads through the Reinhard Village are privately owned. Mr. Johnson stated that the development had been designed to discourage traffic from traversing through the development.
- Mr. Cook (PennDOT) questioned if there is student housing along Route 68. Ms. Lapinto (Clarion Borough) stated that there is some student housing within the Clarion Borough portion of Route 68.
- Ms. Lapinto (Clarion Borough) stated that a proposed development along the eastern side of Route 68 is progressing which would potentially consist of approximately 60 units of senior citizen housing.
- Concerning the existing transit routes along Route 68, Mr. Brosius (Clarion County Commissioner) stated that very few stops are made along Route 68. Sometimes stops are made at Comet and that sidewalks leading to Comet could be beneficial.
- Discussion then ensued concerning the proposed public meeting discussed at the first Steering Committee meeting. Mr. Johnson (AECOM) stated that it would be reasonable to schedule a public meeting after the next Steering Committee meeting when the strategies are presented to the group. Mr. Lewis (Monroe Township Supervisor) stated that the 1st Church of God (soon to be renamed Trinity Point) has offered a space for meetings which will have a capacity of up to 500 occupants.



If you wish to discuss or revise these meeting minutes, please contact me at 412.503.4721 or via email at rachel.myers@aecom.com within five days of receiving these minutes. If I do not receive a response, I will assume you have no comments on the meeting minutes.

Sincerely,

AECOM

A handwritten signature in black ink, appearing to read "Rachel Myers".

Rachel Myers, P.E., PTOE
Traffic Engineer

Attachments: Meeting sign-in sheet

SIGN IN SHEET
CLARION AREA RELIEF ROUTE STUDY STEERING COMMITTEE MEETING
March 23, 2016

ATTEND? (Please check)	NAME	ORG	EMAIL	PHONE
	Sue Smith	Northwest Commission	sues@northwestpa.org	814-677-4800x131
	Ted Tharan	Clarion Co. Commission	ttharan@co.clarion.pa.us	
✓	Wayne Brosius	Clarion Co. Commission	wbrosius@co.clarion.pa.us	814-226-4000x2003
✓	Ed Heasley	Clarion Co. Commission	eheasley@co.clarion.pa.us	814-226-4000 ext 2001
✓	Kristi Ditz	Clarion Co. Planning	kditz@co.clarion.pa.us	814-226-4000x2802 2800
✓	Kevin Reichard	Clarion Co. Planning	kreichard@co.clarion.pa.us	814-229-7285
	Twila Rifenberrick	Clarion Co. Planning (Retired)	tdriftenberrick@windstream.net	
✓	Dave Cook	PennDOT D10	davcook@pa.gov	724-357-2082
✓	Doug Dupnock	PennDOT D10	ddupnock@pa.gov	724-357-2879
	Tim Jablunovsky	PennDOT D10	TJABLUNOV@pa.gov	
✓	Carol Lapinto	Clarion Borough	lapinto1@comcast.net	814-226-5587
	Mark Hall	Clarion Borough	chiefhall@clarionboro.org	814-226-9140x801
✓	Bob Lewis	Monroe Township Supervisor	lslewis4@verizon.net	814-226-6575

SIGN IN SHEET
CLARION AREA RELIEF ROUTE STUDY STEERING COMMITTEE MEETING
March 23, 2016

[illegible]



**Clarion Area Relief Route Study
Minutes from the Steering Committee Meeting #3
REVISION #1**

Project: Clarion Area Relief Route Study
Clarion County
AECOM Project No. 60442961

Date: Thursday, June 10, 2016

Time: 1:30 PM

Place: Clarion County Administrative Building
Second Floor Large Conference Room
330 Main Street
Clarion, PA 16214

Purpose: Steering Committee Meeting #3

Attendees: Sue Smith – Northwest Commission
Wayne Brosius – Clarion County Commissioner
Kristi Ditz – Clarion County Planning
Kevin Reichard – Clarion County Planning
Dave Cook – PennDOT District 10-0
Carol Lapinto – Clarion Borough
Bob Lewis – Monroe Township Supervisor
Mark Hall – Clarion Borough
Keith Johnson – AECOM
Rachel Myers – AECOM

The meeting was held to summarize the relief strategies which AECOM analyzed for the Clarion Relief Study. During the presentation, the attendees provided additional information about the strategies analyzed and offered input while following topics were discussed:

- Mr. Johnson (AECOM) proceeded to summarize the completed analysis of the relief strategies as seen in the prepared presentation.
- While reviewing the current Clarion Curve PennDOT project, the committee questioned if the existing project incorporates sidewalks for the entire project. Mr. Johnson (AECOM) stated that AECOM will review PennDOT's plans and report back to the committee.

- While reviewing the proposed design for the widening of Route 68, Mr. Hall (Clarion Borough) questioned if any kind of divider (median / barrier) will be utilized to separate the northbound and southbound lanes. Mr. Johnson (AECOM) stated that this design was very preliminary and details of that nature were not incorporated at this stage.
- Discussion then ensued concerning sidewalks along Route 68.
 - Ms. Smith (Northwest Commission) questioned if PennDOT considers sidewalks or transit on projects. Mr. Cook (PennDOT) stated that sidewalks are always considered during the preliminary engineering stage and the transit authorities should also be considered at that time.
 - Mr. Cook also stated that Route 68 from Dolby Street to I-80 is currently in the preliminary engineering stages of design.
 - Mr. Johnson (AECOM) stated that sidewalks would need to be further reviewed from a maintenance perspective. PennDOT requires municipalities to maintain sidewalks, but generally municipalities create ordinances in order to assign maintenance responsibility.
 - Mr. Brosius (Clarion County Commissioner) and Ms. Lapinto (Clarion Borough) reinforced that pedestrians are present along Route 68.
- Discussion then ensued concerning the new connection strategy between 2nd Avenue and Hospital Drive.
 - Mr. Cook (PennDOT) asked if the project would require major earthwork. Mr. Johnson (AECOM) stated that no major earthwork is anticipated. The roadway will closely follow the existing grade.
 - Mr. Cook (PennDOT) questioned if the intersection of Main Street (SR 0322) with 2nd Avenue could handle the projected additional traffic due to the new connection. Ms. Myers (AECOM) stated that capacity analysis has been performed at the signalized intersections along Route 68 and Main Street (SR 0322). The analysis indicates that all intersections analyzed are anticipated to operate at acceptable LOS (LOS C or better). The intersection of Main Street (SR 0322) with 2nd Avenue is anticipated to operate at an overall intersection LOS A with the new connection.
 - Discussion ensued concerning the possibility of land development along the new connection road and the economic benefits.
 - Mr. Cook (PennDOT) stated that for reference, \$52 million is programmed on the next TIP for Clarion County as a whole over 4 years.
- Discussion followed concerning a possible second connection between Greenville Pike and Bauer Road.
 - The committee all agreed that this second possible connection should be designed and included in the report.
 - All were in agreement that the golf course should not be impacted by the new connection and the existing electrical right-of-way could be used as a guide for the new connection to Greenville Pike.

- Mr. Brosius (Clarion County Commissioner) stated that this connection does not provide an access point close to I-80 as desired and traffic will still be located on Route 68.
- During reviewing access management strategies for the study area, Mr. Johnson (AECOM) distributed PennDOT Publication 574 (Access Management – Model Ordinance for Pennsylvania Municipalities Handbook).
- While discussing incident management, Mr. Johnson (AECOM) asked the committee if anyone would be interested in creating a Traffic Incident Management (TIM) Team for the Route 68 corridor. Mr. Brosius (Clarion County Commissioner) stated that he could contact the EMS to gather information on if they have a plan already established. Mr. Cook (PennDOT) stated that creating a TIM could be beneficial after the study is submitted.
- While discussing the signal upgrade strategy along Main Street (SR 0322), Ms. Smith (Northwest Commission) stated that there is grant money available to municipalities for signal upgrades through programs such as Green Light Go and ARLE (Automated Red Light Enforcement).
- Discussion ensued concerning the Adaptive Signal strategy. Mr. Hall (Clarion Borough) stated that a few years ago a traffic study was performed concerning the existing signals but the improvements were not able to be implemented. The committee was in agreement to keep the strategy in the report.
- Discussion then ensued concerning the upcoming public meeting.
 - The meeting will be advertised through non-paid advertisement such as websites and social media.
 - The public meeting will consist of a short presentation to display the findings of the study. Comment forms will be available to the public and included in the final report. Also, representatives of AECOM will be available after the presentation to answer questions from the public.
 - Mr. Johnson (AECOM) stated that he will create a draft flyer for Ms. Smith (Northwest Commission) to review and distribute.

If you wish to discuss or revise these meeting minutes, please contact me at 412.503.4721 or via email at rachel.myers@aecom.com within five days of receiving these minutes. If I do not receive a response, I will assume you have no comments on the meeting minutes.

Sincerely,

AECOM

A handwritten signature in black ink, appearing to read "Rachel Myers".

Rachel Myers, P.E., PTOE
Traffic Engineer

AECOM
Foster Plaza 6
681 Andersen Drive, Suite 400
Pittsburgh, PA 15220
Tel: 412.503.4700
Fax: 412.503.4702
www.aecom.com



Attachments: Meeting sign-in sheet

SIGN IN SHEET
CLARION AREA RELIEF ROUTE STUDY STEERING COMMITTEE MEETING
June 9, 2016

ATTEND? (Please check)	NAME	ORG	EMAIL	PHONE
☒	Sue Smith	Northwest Commission	sues@northwestpa.org	814-677-4800x131
	Ted Tharan	Clarion Co. Commission	ttharan@co.clarion.pa.us	
☒	Wayne Brosius	Clarion Co. Commission	wbrosius@co.clarion.pa.us	814-226-4000x2003
	Ed Heasley	Clarion Co. Commission	eheasley@co.clarion.pa.us	814-226-4000x2001
☒	Kristi Ditz	Clarion Co. Planning	kditz@co.clarion.pa.us	814-226-4000x2800
☒	Kevin Reichard	Clarion Co. Planning	kreichard@co.clarion.pa.us	814-229-7285
	Twila Rifemberrick	Clarion Co. Planning (Retired)	tdrifemberrick@windstream.net	
☒	Dave Cook	PennDOT D10	davcook@pa.gov	724-357-2082
	Doug Dupnock	PennDOT D10	ddupnock@pa.gov	724-357-2879
	Tim Jablunovsky	PennDOT D10	TJABLUNOV@pa.gov	
☒	Carol Lapinto	Clarion Borough	lapinto1@comcast.net	814-226-5587
☒	Mark Hall	Clarion Borough	chiefhall@clarionboro.org	814-226-9140x801
☒	Bob Lewis	Monroe Township Supervisor	Islewis4@verizon.net	814-226-6575

SIGN IN SHEET

[illegible]

APPENDIX B

Public Meeting Comments

From: [Johnson, Keith A](#)
To: [Myers, Rachel](#)
Subject: FW: Clarion Area Relief Route Study Comments
Date: Wednesday, June 22, 2016 10:15:52 AM

Additional comment

From: Robert Balough [mailto:balough@verizon.net]
Sent: Wednesday, June 22, 2016 10:10 AM
To: Johnson, Keith A
Subject: FW: Clarion Area Relief Route Study Comments

Mr. Johnson,

One other comment: I am not sure what type of bridge is being proposed in the cost estimates but given the relatively low volume of water on Trout Run, it is very likely a box culvert for Trout Run with dirt and fill used to create the roadway. This could be accomplished at a much lower cost than a steel and concrete structure.

Thank you.

Robert S. Balough
balough@verizon.net

From: Robert Balough [mailto:balough@verizon.net]
Sent: Wednesday, June 22, 2016 9:53 AM
To: 'keith.a.johnson@aecom.com'
Subject: Clarion Area Relief Route Study Comments

Mr. Johnson,

My comments regarding the Rt. 68 Relief Route Study are below.

Thank you.

Although I missed a large portion of the presentation, I did obtain a copy of the PowerPoint slides used. I would be very supportive of the Second Avenue alternative route and believe it would greatly reduce congestion on Route 68. This alternative route is likely to carry more than 16% of the traffic as predicted as the total volume of traffic is likely to rise as a result of the availability of this second route. During I-80 closings or detours this route would also be important for diverting traffic and greatly reducing traffic through the center of town on Rt. 322 to 68 to reconnect to I-80.

The connection from Rt. 68 to the Greenville Extension is less important in my view. Traffic to/from Clarion and the Exit 62 exchange is unlikely to use this connection as it would add travel distance. It would be useful for re-routing traffic headed to I-80 from Clarion over to exit 64 instead of exit 62 but only those intending to travel east bound on I-80 would use it. Traffic coming into Clarion from the east on I-80 currently tend to use the exit 64 interchange so this bypass would have little effect on that traffic pattern.

If the Rt. 68 to Greenville bypass is seriously considered, it should connect to Rt. 68 at the same intersection as the Second Avenue bypass most likely at Dolby Road. A traffic light or round-about could be used. I would prefer to see a round-about used as they are cheaper to build and maintain and studies have definitively shown these to reduce congestion and accidents. Using the common intersection would essentially create a complete bypass from Greenville Ave. to Second Ave.

Robert S. Balough

86 S. 7th Ave.

Clarion, PA 16214

balough@verizon.net

APPENDIX C

PennDOT ATR Data

State of Pennsylvania Dept. of Trans.
 CLASSIFICATION SUMMARY
 Tue 4/7/2015

Page: 1

Site Reference: 000000010919
 Site ID: 000000000000
 Location: SR68 EB
 Direction:
 Lane: 1

EB

File: D0407006.prn
 City:
 County:

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Tota
10:00	0	13	4	0	0	0	0	0	0	0	0	0	0	0	0	17
11:00	1	370	74	0	5	2	0	1	0	0	2	0	0	0	0	455
12:00	0	443	69	0	2	1	0	0	2	0	0	0	0	0	0	517
13:00	0	459	66	0	5	1	0	2	1	0	0	0	0	0	0	534
14:00	0	470	75	0	5	0	1	1	1	0	0	0	0	0	0	553
15:00	0	474	62	0	6	5	0	1	2	0	0	1	0	0	0	551
16:00	0	525	70	1	3	0	1	2	0	0	0	0	1	0	0	603
17:00	0	555	63	0	3	3	0	0	0	0	0	0	0	0	0	624
18:00	0	441	58	0	1	1	0	1	1	0	0	0	0	0	0	503
19:00	1	351	36	0	1	0	0	0	0	0	0	0	0	0	0	389
20:00	0	319	48	0	1	0	0	0	1	0	0	0	0	0	0	369
21:00	0	211	20	0	1	1	0	0	1	0	0	0	0	0	0	234
22:00	0	149	17	0	0	0	0	0	0	0	0	0	0	0	0	166
23:00	0	107	10	0	0	0	0	0	1	0	0	0	0	0	0	118
24:00	0	74	7	0	0	0	0	0	0	0	0	0	0	0	0	81

DAY TOTAL	2	4961	679	1	33	14	2	8	10	0	2	1	1	0	0	5714
PERCENTS	0.1%	86.9%	11.9%	0.1%	0.6%	0.2%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Passenger Vehicles	98.7%															
											Trucks & Buses 1.2%					

AM Times	11:00	12:00	11:00		11:00	11:00		11:00	12:00		11:00					12:00
AM Peaks	1	443	74		5	2		1	2		2					517
PM Times	19:00	17:00	14:00	16:00	15:00	15:00	14:00	13:00	15:00			15:00	16:00			17:00
PM Peaks	1	555	75	1	6	5	1	2	2			1	1			624

WEEK DAY 10:30 - 12:30
 3:30 - 5:30

WEEKEND 10:30 - 2:00

State of Pennsylvania Dept. of Trans.
 CLASSIFICATION SUMMARY
 Wed 4/8/2015

Page: 2

Site Reference: 000000010919
 Site ID: 000000000000
 Location: SR68 EB
 Direction:
 Lane: 1

File: D0407006.prn
 City:
 County:

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
01:00	0	37	1	0	0	0	0	0	0	0	0	0	0	0	0	38
02:00	0	25	2	0	0	1	0	0	0	0	0	0	0	0	0	28
03:00	0	16	2	0	0	0	0	0	1	0	0	0	0	0	0	19
04:00	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	11
05:00	0	18	3	0	0	0	0	0	0	0	0	0	0	0	0	21
06:00	0	45	12	0	0	1	0	1	0	0	0	0	0	0	0	59
07:00	0	125	48	0	2	1	0	0	2	0	0	0	0	0	0	178
08:00	0	229	43	0	7	2	0	0	1	0	0	0	0	0	0	282
09:00	0	285	51	0	5	2	1	2	0	0	0	0	0	0	0	346
10:00	0	287	69	0	3	0	0	0	0	0	0	0	0	0	0	359
11:00	0	398	66	0	4	0	0	0	0	0	0	0	0	0	0	468
12:00	0	413	62	0	2	0	0	1	4	1	0	0	0	0	0	483
13:00	1	503	86	0	4	0	0	2	1	0	0	0	1	0	0	598
14:00	0	486	75	0	4	0	1	0	1	0	0	0	0	0	0	567
15:00	0	482	70	0	8	0	0	0	2	0	0	0	0	0	0	562
16:00	0	558	74	0	1	2	0	0	1	0	0	0	0	0	0	636
17:00	0	555	66	0	0	2	0	1	0	0	0	0	0	0	0	624
18:00	0	444	49	0	2	0	0	0	0	0	0	0	0	0	0	495
19:00	0	395	38	0	0	0	0	0	0	0	0	0	0	0	0	433
20:00	0	343	52	0	1	0	0	0	0	0	0	0	0	0	0	396
21:00	0	238	33	0	2	0	0	0	0	0	0	0	0	0	0	273
22:00	0	192	17	0	1	1	0	0	0	0	0	0	0	0	0	211
23:00	0	112	6	0	0	0	0	0	0	0	0	0	0	0	0	118
24:00	0	85	5	0	0	0	0	0	0	0	0	0	0	0	0	90

DAY TOTAL	1	6282	930	0	46	12	2	7	13	1	0	0	1	0	0	7295
PERCENTS	0.1%	86.2%	12.8%	0.0%	0.7%	0.1%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Passenger Vehicles	98.8%															
Trucks & Buses				1.1%												

AM Times	12:00	10:00	08:00	08:00	09:00	09:00	12:00	12:00								12:00
AM Peaks	413	69	7	2	1	2	4	1								483
PM Times	13:00	16:00	13:00	15:00	16:00	14:00	13:00	15:00				13:00				16:00
PM Peaks	1	558	86	8	2	1	2	2				1				636

State of Pennsylvania Dept. of Trans.
 CLASSIFICATION SUMMARY
 Thu 4/9/2015

Page: 3

Site Reference: 000000010919
 Site ID: 000000000000
 Location: SR68 EB
 Direction:
 Lane: 1

File: D0407006.prn
 City:
 County:

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Tota
01:00	0	39	1	0	0	0	0	0	0	0	0	0	0	0	0	40
02:00	0	23	1	0	0	0	0	0	0	0	0	0	0	0	0	24
03:00	0	19	1	0	0	1	0	0	0	0	0	0	0	0	0	21
04:00	0	10	1	0	0	1	0	0	0	0	0	0	0	0	0	12
05:00	0	13	1	0	0	1	0	0	0	0	0	0	0	0	0	15
06:00	0	32	15	0	0	0	0	0	0	0	0	0	0	0	0	47
07:00	0	141	54	0	2	0	0	1	1	0	0	0	0	0	0	199
08:00	0	212	48	0	4	2	0	0	2	0	0	0	0	0	0	268
09:00	0	301	44	0	6	3	0	2	1	0	0	0	0	0	0	357
10:00	0	334	70	0	1	1	0	0	2	0	0	0	0	0	0	408
11:00	1	382	68	0	0	2	0	0	4	0	0	0	0	0	0	457
12:00	1	391	64	0	2	1	0	3	3	0	0	0	0	0	0	465
13:00	0	449	98	0	3	1	0	0	1	0	0	0	0	0	0	552
14:00	1	466	76	0	1	0	1	0	1	0	0	0	0	0	0	546
15:00	1	472	66	0	12	3	1	0	3	0	0	1	0	0	0	559
16:00	0	562	81	0	1	0	0	0	2	0	0	0	0	0	0	646
17:00	0	588	77	0	2	1	0	0	0	0	0	0	0	0	0	668
18:00	0	484	71	0	4	1	0	0	0	0	0	0	1	0	0	561
19:00	0	401	59	0	3	0	0	0	0	0	0	0	0	0	0	463
20:00	1	298	46	0	1	0	0	0	0	0	0	0	0	0	0	346
21:00	0	246	21	0	0	0	0	0	2	0	0	0	0	0	0	269
22:00	0	170	8	0	0	0	0	0	1	0	0	0	0	0	0	179
23:00	0	108	11	0	0	0	0	0	1	0	0	0	0	0	0	120
24:00	0	64	10	0	1	0	0	0	0	0	0	0	0	0	0	75

DAY TOTAL	5	6205	992	0	43	18	2	6	24	0	0	1	1	0	0	7297
PERCENTS	0.1%	85.1%	13.6%	0.0%	0.6%	0.3%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Passenger Vehicles	98.6%															
Trucks & Buses	1.3%															

AM Times	11:00	12:00	10:00	09:00	09:00	12:00	11:00									12:00
AM Peaks	1	391	70	6	3	3	4									465
PM Times	14:00	17:00	13:00	15:00	15:00	14:00	15:00				15:00	18:00				17:00
PM Peaks	1	588	98	12	3	1	3				1	1				668

State of Pennsylvania Dept. of Trans.
 CLASSIFICATION SUMMARY
 Fri 4/10/2015

Page: 4

Site Reference: 000000010919
 Site ID: 000000000000
 Location: SR68 EB
 Direction:
 Lane: 1

File: D0407006.prn
 City:
 County:

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
01:00	0	32	1	0	0	0	0	0	0	0	0	0	0	0	0	33
02:00	0	17	1	0	1	1	0	0	0	0	0	0	0	0	0	20
03:00	0	21	1	0	0	0	0	0	0	0	0	0	0	0	0	22
04:00	0	13	3	0	0	1	0	0	0	0	0	0	0	0	0	17
05:00	0	15	1	0	0	0	0	0	0	0	0	0	0	0	0	16
06:00	0	43	18	0	0	0	0	1	1	0	0	0	0	0	0	63
07:00	0	117	35	0	2	0	0	1	0	0	0	0	0	0	0	155
08:00	0	234	51	0	5	0	0	0	2	0	0	0	0	0	0	292
09:00	0	272	45	0	3	1	0	2	1	0	0	0	0	0	0	324
10:00	0	277	75	0	3	1	1	0	3	0	0	0	0	0	0	360
11:00	0	388	59	1	3	1	0	3	1	0	0	1	1	0	0	458
12:00	0	453	82	0	3	1	0	2	6	0	0	0	0	0	0	547
13:00	0	598	83	0	7	1	0	1	0	0	0	0	0	0	0	690
14:00	0	507	84	1	5	0	0	2	1	0	0	0	0	0	0	600
15:00	1	526	72	0	7	0	0	0	3	0	0	0	0	0	0	609
16:00	1	547	80	0	2	1	1	1	0	0	0	0	0	0	0	633
17:00	0	691	69	0	1	2	0	0	1	0	0	0	0	0	0	764
18:00	1	524	83	0	0	0	0	0	1	0	0	0	0	0	0	609
19:00	1	527	79	0	0	0	0	0	0	0	0	0	0	0	0	607
20:00	1	465	45	0	0	0	0	0	0	0	0	0	0	0	0	511
21:00	0	326	43	0	0	0	0	1	0	0	0	0	0	0	0	370
22:00	0	243	28	0	2	0	0	1	0	0	0	0	0	0	0	274
23:00	0	148	21	0	0	0	0	0	0	0	0	0	0	0	0	169
24:00	0	125	10	0	1	0	0	0	0	0	0	0	0	0	0	136

DAY TOTAL	5	7109	1069	2	45	10	2	15	20	0	0	1	1	0	0	8279
PERCENTS	0.1%	85.9%	13.0%	0.1%	0.5%	0.1%	0.0%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Passenger Vehicles	98.8%															
	Trucks & Buses										1.1%					
AM Times	12:00	12:00	11:00	08:00	02:00	10:00	11:00	12:00				11:00	11:00			12:00
AM Peaks	453	82	1	5	1	1	3	6				1	1			547
PM Times	15:00	17:00	14:00	14:00	13:00	17:00	16:00	14:00	15:00							17:00
PM Peaks	1	691	84	1	7	2	1	2	3							764

State of Pennsylvania Dept. of Trans.
 CLASSIFICATION SUMMARY
 Sat 4/11/2015

Page: 5

Site Reference: 000000010919
 Site ID: 000000000000
 Location: SR68 EB
 Direction:
 Lane: 1

File: D0407006.prn
 City:
 County:

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
01:00	0	73	5	0	0	0	0	0	1	0	0	0	0	0	0	79
02:00	0	40	0	0	0	0	0	1	0	0	0	0	0	0	0	41
03:00	0	25	1	0	0	0	0	0	1	0	0	0	0	0	0	27
04:00	0	13	4	0	0	0	0	0	0	0	0	0	0	0	0	17
05:00	0	6	3	0	0	0	0	0	0	0	0	0	0	0	0	9
06:00	0	26	5	0	0	0	0	0	0	0	0	0	0	0	0	31
07:00	0	46	13	0	1	0	0	0	0	0	0	0	0	0	0	60
08:00	1	90	16	0	0	0	0	1	2	0	0	0	0	0	0	110
09:00	0	190	36	0	3	0	0	0	0	0	0	0	0	0	0	229
10:00	0	276	57	0	1	1	0	0	1	0	0	0	0	0	0	336
11:00	0	361	71	0	1	1	0	0	0	0	0	0	0	0	0	434
12:00	0	415	65	0	0	1	0	0	0	0	0	0	0	0	0	481
13:00	2	446	59	0	1	0	0	1	0	0	0	0	0	0	0	510
14:00	1	408	64	0	1	0	0	0	1	0	0	0	1	0	0	475
15:00	0	443	58	0	1	0	0	0	0	0	0	0	0	0	0	502
16:00	2	443	62	0	1	0	0	0	0	0	0	0	0	0	0	508
17:00	2	444	44	0	2	0	0	0	0	0	0	0	0	0	0	492
18:00	3	377	55	0	0	0	0	1	0	0	0	0	0	0	0	436
19:00	0	402	52	1	0	0	0	1	1	0	0	0	0	0	0	457
20:00	0	381	43	0	1	0	0	0	0	0	0	0	0	0	0	425
21:00	1	301	30	0	0	0	0	0	0	0	0	0	0	0	0	332
22:00	0	250	27	0	0	0	0	0	0	0	0	0	0	0	0	277
23:00	0	147	16	0	0	0	0	0	1	0	0	0	0	0	0	164
24:00	0	105	16	0	0	0	0	0	0	0	0	0	0	0	0	121

DAY TOTAL	12	5708	802	1	13	3	0	5	8	0	0	0	1	0	0	6553
PERCENTS	0.2%	87.2%	12.3%	0.1%	0.1%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Passenger Vehicles	99.5%															
	Trucks & Buses 0.4%															

AM Times	08:00	12:00	11:00		09:00	10:00		02:00	08:00							12:00
AM Peaks	1	415	71		3	1		1	2							481
PM Times	18:00	13:00	14:00	19:00	17:00			13:00	14:00			13:00				13:00
PM Peaks	3	446	64	1	2			1	1			1				510

State of Pennsylvania Dept. of Trans.
 CLASSIFICATION SUMMARY
 Sun 4/12/2015

Page: 6

Site Reference: 000000010919
 Site ID: 000000000000
 Location: SR68 EB
 Direction:
 Lane: 1

File: D0407006.prn
 City:
 County:

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
01:00	0	60	5	0	0	0	0	0	0	0	0	0	0	0	0	65
02:00	0	33	2	0	0	0	0	0	0	0	0	0	0	0	0	35
03:00	0	17	2	0	0	0	0	0	0	0	0	0	0	0	0	19
04:00	0	7	1	0	0	0	0	0	0	0	0	0	0	0	0	8
05:00	0	11	3	0	1	0	0	0	0	0	0	0	0	0	0	15
06:00	0	10	1	0	0	0	0	0	0	0	0	0	0	0	0	11
07:00	0	19	5	0	1	0	0	0	0	0	0	0	0	0	0	25
08:00	1	71	11	0	0	0	0	0	0	0	0	0	0	0	0	83
09:00	1	189	19	0	6	0	0	0	0	0	0	0	0	0	0	215
10:00	0	190	31	0	1	0	0	0	0	0	0	0	0	0	0	222
11:00	1	241	45	0	1	0	0	1	0	0	0	0	0	0	0	289
12:00	3	288	53	0	0	0	0	0	0	0	0	0	0	0	0	344
13:00	7	431	42	0	0	0	0	0	0	0	0	1	0	0	0	481
14:00	7	440	54	0	2	0	0	1	1	0	0	0	0	0	0	505
15:00	12	362	47	0	0	0	0	1	0	0	1	1	0	0	0	424
16:00	7	395	41	0	1	0	0	2	0	0	0	0	0	0	0	446
17:00	14	341	39	0	0	0	0	1	0	0	0	0	0	0	0	395
18:00	3	361	27	0	0	0	0	2	1	0	0	0	0	0	0	394
19:00	3	349	42	0	0	0	0	0	0	0	0	0	1	0	0	395
20:00	7	300	37	1	0	0	0	0	0	0	0	0	0	0	0	345
21:00	0	209	25	0	0	0	0	0	0	0	0	0	0	0	0	234
22:00	1	155	14	0	0	0	0	0	0	0	0	0	0	0	0	170
23:00	1	130	13	0	0	0	0	1	0	0	0	0	0	0	0	145
24:00	0	68	7	0	0	0	0	0	0	0	0	0	0	0	0	75

DAY TOTAL	68	4677	566	1	13	0	0	9	2	0	1	2	1	0	0	5340
PERCENTS	1.3%	87.6%	10.6%	0.1%	0.3%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Passenger Vehicles	99.4%															
	Trucks & Buses 0.5%															

AM Times	12:00	12:00	12:00	09:00	11:00	12:00
AM Peaks	3	288	53	6	1	344
PM Times	17:00	14:00	14:00	20:00	14:00	16:00
PM Peaks	14	440	54	1	2	15:00
						13:00
						19:00
						14:00
						505

State of Pennsylvania Dept. of Trans.
 CLASSIFICATION SUMMARY
 Mon 4/13/2015

Page: 7

Site Reference: 000000010919
 Site ID: 000000000000
 Location: SR68 EB
 Direction:
 Lane: 1

File: D0407006.prn
 City:
 County:

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
01:00	0	32	5	0	0	0	0	0	0	0	0	0	0	0	0	37
02:00	0	17	2	0	0	0	0	0	0	0	0	0	0	0	0	19
03:00	0	11	1	0	1	0	0	0	0	0	0	0	0	0	0	13
04:00	0	9	3	0	0	0	0	0	1	0	0	0	0	0	0	13
05:00	0	8	3	0	0	1	0	0	0	0	0	0	0	0	0	12
06:00	0	42	15	0	0	2	0	0	1	0	0	0	0	0	0	60
07:00	0	115	53	0	1	1	3	0	1	0	0	0	0	0	0	174
08:00	0	217	43	0	3	2	3	3	1	0	1	0	0	0	0	273
09:00	1	285	46	0	3	3	5	1	5	0	0	0	1	0	0	350
10:00	1	270	69	0	1	0	6	0	3	0	0	0	0	0	0	350
11:00	3	350	58	1	6	0	8	2	3	0	0	1	1	0	0	433
12:00	4	419	80	0	5	2	4	1	6	0	0	1	0	0	0	522
13:00	2	503	81	0	6	0	5	0	1	0	0	2	0	0	0	600
14:00	5	493	76	1	4	3	6	1	0	0	1	1	0	0	0	591
15:00	2	507	62	0	4	1	5	1	1	0	0	0	0	0	0	583
16:00	0	518	67	0	2	0	6	1	1	0	0	0	0	0	0	595
17:00	5	552	66	0	0	2	6	4	0	0	0	0	0	0	0	635
18:00	2	450	48	0	2	0	0	0	0	0	0	0	0	0	0	502
19:00	3	349	50	0	1	0	0	0	1	0	0	0	0	0	0	404
20:00	3	283	46	0	0	0	0	1	2	0	0	0	0	0	0	335
21:00	1	229	33	0	2	0	0	0	0	0	0	0	0	0	0	265
22:00	0	162	21	0	0	0	0	1	1	0	0	0	0	0	0	185
23:00	0	136	14	0	0	0	0	0	0	0	0	0	0	0	0	150
24:00	0	74	5	0	0	0	0	0	0	0	0	0	0	0	0	79

DAY TOTAL	32	6031	947	2	41	17	57	16	28	0	2	5	2	0	0	7180
PERCENTS	0.5%	84.0%	13.2%	0.1%	0.6%	0.3%	0.8%	0.2%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Passenger Vehicles	97.6%															
	Trucks & Buses 2.3%															
AM Times	12:00	12:00	12:00	11:00	11:00	09:00	11:00	08:00	12:00		08:00	11:00	09:00			12:00
AM Peaks	4	419	80	1	6	3	8	3	6		1	1	1			522
PM Times	14:00	17:00	13:00	14:00	13:00	14:00	14:00	17:00	20:00		14:00	13:00				17:00
PM Peaks	5	552	81	1	6	3	6	4	2		1	2				635

State of Pennsylvania Dept. of Trans.
 CLASSIFICATION SUMMARY
 Tue 4/14/2015

Page: 8

Site Reference: 000000010919
 Site ID: 000000000000
 Location: SR68 EB
 Direction:
 Lane: 1

File: D0407006.prn
 City:
 County:

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Tota
01:00	0	25	2	0	0	1	0	0	1	0	0	0	0	0	0	29
02:00	0	13	1	0	0	1	0	0	0	0	0	0	0	0	0	15
03:00	0	18	2	0	0	1	0	0	0	0	0	0	0	0	0	21
04:00	0	11	2	0	2	1	0	0	0	0	0	0	0	0	0	16
05:00	0	11	3	0	0	0	0	0	0	0	0	0	0	0	0	14
06:00	0	40	14	0	0	0	0	0	0	0	0	0	0	0	0	54
07:00	2	111	58	0	3	1	1	0	0	0	0	0	0	0	0	176
08:00	0	234	44	0	3	2	6	1	0	0	0	0	0	0	0	290
09:00	1	275	45	0	6	3	8	2	2	0	0	0	0	0	0	342
10:00	0	327	67	0	4	1	5	0	4	0	0	0	0	0	0	408
11:00	1	357	78	0	3	2	4	3	2	1	1	0	1	0	0	453
12:00	1	412	75	0	1	1	3	1	1	0	0	0	0	0	0	495
13:00	0	446	79	0	3	3	4	0	2	0	0	0	1	0	0	538
14:00	0	479	76	0	2	0	4	0	2	0	0	0	0	0	0	563
15:00	1	482	79	0	5	0	2	0	2	0	0	0	1	0	0	572
16:00	1	525	63	0	1	1	1	1	4	0	0	0	1	0	0	598
17:00	0	549	67	0	1	1	1	0	0	0	0	0	0	0	0	619
18:00	1	430	52	0	1	1	0	0	0	0	0	0	0	0	0	485
19:00	0	378	46	0	1	0	0	0	1	0	0	0	0	0	0	426
20:00	0	328	49	0	2	0	0	0	0	0	0	0	0	0	0	379
21:00	1	229	25	0	1	1	0	1	0	0	0	0	0	0	0	258
22:00	1	168	15	0	0	0	0	0	0	0	0	0	0	0	0	184
23:00	0	102	9	0	0	0	0	0	0	0	0	0	0	0	0	111
24:00	0	58	6	0	0	0	0	0	0	0	0	0	0	0	0	64
DAY TOTAL	10	6008	957	0	39	21	39	9	21	1	1	0	4	0	0	7110
PERCENTS	0.2%	84.6%	13.5%	0.0%	0.6%	0.3%	0.5%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Passenger Vehicles	98.1%															
	Trucks & Buses										1.8%					
AM Times	07:00	12:00	11:00		09:00	09:00	09:00	11:00	10:00	11:00	11:00		11:00			12:00
AM Peaks	2	412	78		6	3	8	3	4	1	1		1			495
PM Times	15:00	17:00	13:00		15:00	13:00	13:00	16:00	16:00				13:00			17:00
PM Peaks	1	549	79		5	3	4	1	4				1			619

State of Pennsylvania Dept. of Trans.
CLASSIFICATION SUMMARY
Wed 4/15/2015

Page: 9

Site ID: 00000000000000

Direction:

File: D0407006.prn

City:

County:

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Tota
01:00	0	50	2	0	0	0	0	0	0	0	0	0	0	0	0	52
02:00	0	17	3	0	0	0	0	0	0	0	0	0	0	0	0	20
03:00	0	12	1	0	0	0	0	0	0	0	0	0	0	0	0	13
04:00	0	8	1	0	0	0	0	0	1	0	0	0	0	0	0	10
05:00	0	14	3	0	0	0	0	0	1	0	0	0	0	0	0	18
06:00	0	42	12	0	0	0	0	0	2	0	0	0	0	0	0	56
07:00	0	123	61	0	1	2	3	0	0	0	0	0	0	0	0	190
08:00	0	241	44	1	4	1	3	0	2	0	0	0	0	0	0	296
09:00	1	294	75	0	4	0	3	0	2	0	1	0	0	0	0	380
10:00	0	297	59	0	8	1	3	0	2	0	0	0	0	0	0	370
11:00	2	383	65	1	0	2	3	2	2	0	0	0	1	0	0	461
12:00	0	123	29	0	0	1	1	0	0	0	1	0	0	0	0	155

DAY TOTAL	3	1604	355	2	17	7	16	2	12	0	2	0	1	0	0	2021
PERCENTS	0.2%	79.4%	17.6%	0.1%	0.9%	0.4%	0.8%	0.1%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Passenger Vehicles		97.0%														
								Trucks & Buses		2.9%						

AM Times	11:00	11:00	09:00	08:00	10:00	07:00	07:00	11:00	06:00		09:00		11:00		11:00
AM Peaks	2	383	75	1	8	2	3	2	2		1		1		461

PM Peaks

State of Pennsylvania Dept. of Trans.
 CLASSIFICATION SUMMARY
 Tue 4/7/2015

Page: 1

Site Reference: 000000010926
 Site ID: 000000000000
 Location: SR68WB
 Direction:
 Lane: 1

WB

File: D0407004.prn
 City:
 County:

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Tota
11:00	0	254	49	2	3	1	0	0	0	0	0	0	1	0	0	310
12:00	0	485	107	0	3	0	0	1	2	0	0	0	0	0	0	598
13:00	0	492	102	0	5	0	2	0	1	0	0	0	1	0	0	603
14:00	0	440	92	0	5	2	0	1	1	0	0	0	0	0	0	541
15:00	0	436	79	0	6	2	2	0	0	0	0	1	0	0	0	526
16:00	0	543	114	1	3	1	0	2	1	0	0	1	0	0	0	666
17:00	0	535	81	1	4	1	0	2	2	0	0	0	0	0	0	626
18:00	1	449	90	0	2	0	0	0	0	0	1	0	0	0	0	543
19:00	1	343	35	0	0	0	0	0	0	0	0	0	0	0	0	379
20:00	0	261	44	0	0	0	0	0	0	0	0	0	1	0	0	306
21:00	0	165	21	0	1	0	0	0	1	0	0	0	0	0	0	188
22:00	0	111	15	0	1	1	0	0	0	0	0	0	0	0	0	128
23:00	0	89	9	0	0	0	0	0	0	0	0	0	0	0	0	98
24:00	0	37	4	0	0	0	0	0	0	0	0	0	0	0	0	41

DAY TOTAL	2	4640	842	4	33	8	4	6	8	0	1	2	3	0	0	5553
PERCENTS	0.1%	83.6%	15.2%	0.1%	0.6%	0.2%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Passenger Vehicles	98.7%															
	Trucks & Buses 1.2%															

AM Times	12:00	12:00	11:00	11:00	11:00		12:00	12:00			11:00					12:00
AM Peaks	485	107	2	3	1		1	2			1					598
PM Times	18:00	16:00	16:00	16:00	15:00	14:00	13:00	16:00	17:00		18:00	15:00	13:00			16:00
PM Peaks	1	543	114	1	6	2	2	2	2		1	1	1			666

WEEKDAY 10.30 - 12.30

3.30 - 5.30

WEEKEND 10.30 - 2.00

State of Pennsylvania Dept. of Trans.
 CLASSIFICATION SUMMARY
 Wed 4/8/2015

Page: 2

Site Reference: 000000010926
 Site ID: 000000000000
 Location: SR68WB
 Direction:
 Lane: 1

File: D0407004.prn
 City:
 County:

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
01:00	0	14	2	0	0	0	0	0	0	0	0	0	0	0	0	16
02:00	0	15	1	0	0	0	0	0	0	0	0	0	0	0	0	16
03:00	0	10	1	0	0	1	0	0	0	0	0	0	0	0	0	12
04:00	0	12	2	0	0	0	0	0	0	0	0	0	0	0	0	14
05:00	0	22	2	0	0	0	0	0	1	0	0	0	0	0	0	25
06:00	0	56	19	0	3	1	0	0	1	0	0	0	0	0	0	80
07:00	0	154	42	0	2	1	0	1	3	0	0	0	0	0	0	203
08:00	0	286	46	0	6	0	0	0	3	2	0	0	0	0	0	343
09:00	0	264	55	0	10	1	0	2	3	0	0	0	0	0	0	335
10:00	0	348	84	0	3	0	0	0	0	3	0	0	0	0	0	438
11:00	0	429	79	0	7	1	0	1	0	0	0	0	0	0	0	517
12:00	0	458	100	0	4	2	1	0	4	0	0	0	0	0	0	569
13:00	2	553	113	0	5	0	1	1	2	0	2	0	0	0	0	679
14:00	0	477	91	0	2	0	2	0	3	0	0	0	0	0	0	575
15:00	0	477	85	0	4	0	0	0	1	0	0	0	1	0	0	568
16:00	0	548	115	3	5	0	0	0	0	0	0	0	2	0	0	673
17:00	0	560	84	0	1	0	0	2	3	0	0	0	0	0	0	650
18:00	0	515	94	0	0	0	0	0	0	0	2	0	0	0	0	611
19:00	0	377	59	0	0	1	0	0	3	0	0	0	0	0	0	440
20:00	1	262	50	0	2	0	0	0	1	0	0	0	0	0	0	316
21:00	0	189	24	0	0	0	0	0	0	0	0	0	0	0	0	213
22:00	0	121	19	0	1	0	0	0	0	0	0	0	0	0	0	141
23:00	0	74	9	0	0	0	0	0	0	0	0	0	0	0	0	83
24:00	0	53	5	0	0	0	0	0	0	0	0	0	0	0	0	58
DAY TOTAL	3	6274	1181	3	55	8	4	7	28	5	4	0	3	0	0	7575
PERCENTS	0.1%	82.9%	15.6%	0.1%	0.8%	0.2%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Passenger Vehicles	98.4%															
	Trucks & Buses															1.5%
AM Times	12:00	12:00		09:00	12:00	12:00	09:00	12:00	10:00							12:00
AM Peaks	458	100		10	2	1	2	4	3							569
PM Times	13:00	17:00	16:00	16:00	13:00	19:00	14:00	17:00	14:00		13:00		16:00			13:00
PM Peaks	2	560	115	3	5	1	2	2	3		2		2			679

State of Pennsylvania Dept. of Trans.
 CLASSIFICATION SUMMARY
 Thu 4/9/2015

Page: 3

Site Reference: 000000010926
 Site ID: 000000000000
 Location: SR68WB
 Direction:
 Lane: 1

File: D0407004.prn
 City:
 County:

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
01:00	0	22	1	0	0	0	0	0	0	0	0	0	0	0	0	23
02:00	0	15	4	0	0	0	0	0	0	0	0	0	0	0	0	19
03:00	0	18	2	0	0	0	0	0	0	0	0	0	0	0	0	20
04:00	0	12	2	0	0	0	0	0	0	0	0	0	0	0	0	14
05:00	0	17	7	0	0	0	0	0	1	0	0	0	0	0	0	25
06:00	0	56	12	0	0	1	0	0	0	0	0	0	0	0	0	69
07:00	0	138	34	0	2	2	0	0	0	0	0	0	0	0	0	176
08:00	1	286	56	0	4	3	1	1	3	0	0	0	0	0	0	355
09:00	0	279	55	0	7	1	1	0	2	0	0	0	0	0	0	345
10:00	0	360	67	1	6	1	2	0	2	0	1	1	1	0	0	442
11:00	0	410	89	0	1	1	0	0	2	0	0	0	0	0	0	503
12:00	1	428	101	0	4	2	1	2	5	0	0	0	0	0	0	544
13:00	0	549	118	0	4	0	0	1	2	0	0	0	0	0	0	674
14:00	0	477	101	0	2	0	0	1	0	0	1	0	0	0	0	582
15:00	1	484	99	0	7	1	0	0	1	0	0	0	0	0	0	593
16:00	1	616	109	1	9	0	0	0	6	0	0	0	0	0	0	744
17:00	0	550	127	0	3	1	0	1	4	0	3	0	0	0	0	689
18:00	0	493	90	0	1	1	0	1	1	0	1	1	0	0	0	589
19:00	0	404	66	0	2	0	0	0	4	0	1	0	1	0	0	478
20:00	0	222	44	0	4	0	0	0	0	0	0	0	0	0	0	270
21:00	0	167	25	0	1	0	0	0	0	0	0	0	0	0	0	193
22:00	1	101	9	0	0	2	0	0	0	0	0	0	0	0	0	113
23:00	0	74	9	0	0	0	0	0	0	0	0	0	0	0	0	83
24:00	0	35	6	0	1	1	0	0	0	0	0	0	0	0	0	43
DAY TOTAL	5	6213	1233	2	58	17	5	7	33	0	7	2	4	0	0	7586
PERCENTS	0.1%	82.0%	16.3%	0.1%	0.8%	0.3%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Passenger Vehicles	98.2%															
	Trucks & Buses										1.7%					
AM Times	08:00	12:00	12:00	10:00	09:00	08:00	10:00	12:00	12:00		10:00	10:00	10:00			12:00
AM Peaks	1	428	101	1	7	3	2	2	5		1	1	1			544
PM Times	15:00	16:00	17:00	16:00	16:00	22:00		13:00	16:00		17:00	18:00	16:00			16:00
PM Peaks	1	616	127	1	9	2		1	6		3	1	2			744

State of Pennsylvania Dept. of Trans.
 CLASSIFICATION SUMMARY
 Fri 4/10/2015

Page: 4

Site Reference: 000000010926
 Site ID: 000000000000
 Location: SR68WB
 Direction:
 Lane: 1

File: D0407004.prn
 City:
 County:

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Tota
01:00	0	19	1	0	0	0	0	0	0	0	0	0	0	0	0	20
02:00	0	11	2	0	0	0	0	0	0	0	0	0	0	0	0	13
03:00	0	14	3	0	0	0	0	0	0	0	0	0	0	0	0	17
04:00	0	15	2	0	2	0	0	0	1	0	0	0	0	0	0	20
05:00	0	14	7	0	0	0	0	0	0	0	0	0	0	0	0	21
06:00	0	51	9	0	2	0	0	1	1	0	0	0	0	0	0	64
07:00	0	133	31	0	1	2	0	0	0	0	0	0	0	0	0	167
08:00	1	284	50	0	3	0	0	0	3	0	0	0	0	0	0	341
09:00	0	278	67	3	9	3	0	1	2	0	0	0	0	0	0	363
10:00	0	358	80	0	6	0	0	2	2	0	0	0	0	0	0	448
11:00	0	460	101	1	5	1	0	0	2	0	0	0	0	0	0	570
12:00	0	547	110	0	6	1	0	3	3	0	0	1	0	0	0	671
13:00	0	560	109	1	4	0	0	4	2	0	0	0	1	0	0	681
14:00	1	525	85	0	6	1	0	1	0	0	0	0	1	0	0	620
15:00	1	549	88	0	5	0	0	0	1	0	0	0	0	0	0	644
16:00	0	669	120	0	4	1	0	1	1	0	0	0	0	0	0	796
17:00	0	685	113	0	4	1	0	0	1	0	0	0	0	0	0	804
18:00	2	556	108	0	0	0	0	1	0	0	0	0	0	0	0	667
19:00	2	488	83	0	0	2	0	0	0	0	0	0	0	0	0	575
20:00	2	355	58	1	0	0	0	0	0	0	0	0	0	0	0	416
21:00	0	241	32	0	1	0	0	0	0	0	0	0	0	0	0	274
22:00	0	145	22	0	0	0	0	0	0	0	0	0	0	0	0	167
23:00	1	119	11	0	0	0	0	0	0	0	0	0	0	0	0	131
24:00	0	66	8	0	0	0	0	0	0	0	0	0	0	0	0	74
DAY TOTAL	10	7142	1300	6	58	12	0	14	19	0	0	1	2	0	0	8564
PERCENTS	0.2%	83.4%	15.2%	0.1%	0.7%	0.1%	0.0%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Passenger Vehicles	98.6%															
Trucks & Buses	1.3%															
AM Times	08:00	12:00	12:00	09:00	09:00	09:00		12:00	08:00			12:00				12:00
AM Peaks	1	547	110	3	9	3		3	3			1				671
PM Times	18:00	17:00	16:00	13:00	14:00	19:00		13:00	13:00			13:00				17:00
PM Peaks	2	685	120	1	6	2		4	2			1				804

State of Pennsylvania Dept. of Trans.
 CLASSIFICATION SUMMARY
 Sat 4/11/2015

Page: 5

Site Reference: 000000010926
 Site ID: 000000000000
 Location: SR68WB
 Direction:
 Lane: 1

File: D0407004.prn
 City:
 County:

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
01:00	0	37	4	0	0	0	0	0	0	0	0	0	0	0	0	41
02:00	0	26	0	0	0	0	0	1	1	0	0	0	0	0	0	28
03:00	0	20	2	0	0	0	0	0	0	0	0	0	0	0	0	22
04:00	0	9	5	0	0	0	0	0	0	0	0	0	0	0	0	14
05:00	0	14	3	0	0	0	0	0	0	0	0	0	0	0	0	17
06:00	0	26	8	0	0	0	0	0	0	0	0	0	0	0	0	34
07:00	2	85	19	0	1	0	0	0	0	0	0	0	0	0	0	107
08:00	1	107	23	0	2	0	0	1	0	0	0	0	0	0	0	134
09:00	0	173	42	1	2	1	0	1	1	0	0	0	0	0	0	221
10:00	0	310	73	0	2	1	0	1	0	0	1	0	0	0	0	388
11:00	0	472	89	0	1	0	0	1	0	0	0	0	0	0	0	563
12:00	0	508	106	0	0	0	0	0	0	0	0	0	0	0	0	614
13:00	0	498	96	0	2	0	0	0	1	0	0	0	0	0	0	597
14:00	2	443	70	0	1	0	0	0	0	0	0	0	0	0	0	516
15:00	0	470	66	0	2	0	0	0	0	0	1	1	0	0	0	540
16:00	3	418	82	0	2	0	0	0	0	0	0	0	0	0	0	505
17:00	3	379	63	0	0	1	0	1	1	0	0	0	0	0	0	448
18:00	2	354	57	0	0	0	0	1	0	0	0	0	0	0	0	414
19:00	1	382	70	1	0	0	0	1	0	0	1	0	0	0	0	456
20:00	0	305	49	0	1	0	0	0	0	0	0	0	0	0	0	355
21:00	0	218	31	0	0	0	0	0	0	0	0	0	0	0	0	249
22:00	0	146	25	0	0	0	0	0	0	0	0	0	0	0	0	171
23:00	0	119	11	0	1	0	0	0	0	0	0	0	0	0	0	131
24:00	0	50	6	0	0	0	0	0	0	0	0	0	0	0	0	56

DAY TOTAL	14	5569	1000	2	17	3	0	8	4	0	3	1	0	0	0	6621
PERCENTS	0.3%	84.2%	15.2%	0.0%	0.2%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Passenger Vehicles	99.4%															
	Trucks & Buses										0.5%					
AM Times	07:00	12:00	12:00	09:00	08:00	09:00		02:00	02:00		10:00					12:00
AM Peaks	2	508	106	1	2	1		1	1		1					614
PM Times	16:00	13:00	13:00	19:00	13:00	17:00		17:00	13:00		15:00	15:00				13:00
PM Peaks	3	498	96	1	2	1		1	1		1	1				597

State of Pennsylvania Dept. of Trans.
 CLASSIFICATION SUMMARY
 Mon 4/13/2015

Page: 7

Site Reference: 000000010926
 Site ID: 000000000000
 Location: SR68WB
 Direction:
 Lane: 1

File: D0407004.prn
 City:
 County:

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Tota
01:00	0	15	5	0	0	0	0	0	0	0	0	0	0	0	0	20
02:00	0	15	2	0	0	0	0	0	0	0	0	0	0	0	0	17
03:00	0	7	4	0	0	0	0	0	0	0	0	0	0	0	0	11
04:00	0	10	2	0	1	0	0	0	0	0	0	0	0	0	0	13
05:00	0	17	5	0	0	1	0	0	1	0	0	0	0	0	0	24
06:00	0	58	18	0	1	2	0	0	1	0	0	0	0	0	0	80
07:00	2	148	29	0	0	4	0	1	6	0	0	0	0	0	0	190
08:00	0	292	47	0	2	4	0	0	1	0	0	0	0	0	0	346
09:00	0	286	66	1	7	6	1	1	2	0	0	0	0	0	0	370
10:00	0	355	83	1	2	5	0	1	1	0	0	0	1	0	0	449
11:00	4	398	87	0	3	7	1	3	6	0	0	0	1	0	0	510
12:00	1	457	85	1	5	5	0	1	2	0	0	0	0	0	0	557
13:00	4	527	97	1	6	7	2	0	0	0	0	0	0	0	0	644
14:00	3	463	85	0	2	5	2	1	4	0	0	0	0	0	0	565
15:00	3	448	79	1	2	6	1	0	1	0	0	0	0	0	0	541
16:00	2	525	114	1	6	3	1	1	2	0	0	1	1	0	0	657
17:00	6	552	86	0	3	3	0	1	1	0	0	0	0	0	0	652
18:00	4	411	83	0	2	0	0	0	1	0	0	0	0	0	0	501
19:00	4	363	61	0	2	0	0	0	0	0	0	1	0	0	0	431
20:00	4	258	53	1	2	0	0	1	0	0	0	0	0	0	0	319
21:00	2	198	31	0	0	0	0	1	1	0	0	0	0	0	0	233
22:00	0	112	16	0	1	0	0	0	0	0	0	0	0	0	0	129
23:00	0	76	9	0	0	0	0	0	0	0	0	0	1	0	0	86
24:00	0	51	5	0	1	0	0	0	0	0	0	0	0	0	0	57
DAY TOTAL	39	6042	1152	7	48	58	8	12	30	0	0	2	4	0	0	7402
PERCENTS	0.6%	81.7%	15.6%	0.1%	0.7%	0.7%	0.1%	0.1%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Passenger Vehicles	97.7%															
Trucks & Buses	2.2%															
AM Times	11:00	12:00	11:00	09:00	09:00	11:00	09:00	11:00	07:00			10:00				12:00
AM Peaks	4	457	87	1	7	7	1	3	6			1				557
PM Times	17:00	17:00	16:00	13:00	13:00	13:00	13:00	14:00	14:00			16:00	16:00			16:00
PM Peaks	6	552	114	1	6	7	2	1	4			1	1			657

State of Pennsylvania Dept. of Trans.
 CLASSIFICATION SUMMARY
 Tue 4/14/2015

Page: 8

Site Reference: 000000010926
 Site ID: 000000000000
 Location: SR68WR
 Direction:
 Lane: 1

File: D0407004.prn
 City:
 County:

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
01:00	0	17	2	0	0	0	0	0	1	0	0	0	0	0	0	20
02:00	0	14	2	0	0	0	0	0	0	0	0	0	0	0	0	16
03:00	0	13	2	0	0	0	0	0	0	0	0	0	0	0	0	15
04:00	0	11	2	0	0	1	0	0	1	0	0	0	0	0	0	15
05:00	0	21	4	0	0	0	0	0	0	0	0	0	0	0	0	25
06:00	0	46	15	1	2	0	0	0	0	0	0	0	0	0	0	64
07:00	0	145	38	0	4	3	1	0	2	0	0	0	1	0	0	194
08:00	0	296	55	1	4	3	2	0	1	0	0	1	0	0	0	363
09:00	0	296	68	0	7	6	0	2	2	0	0	0	0	0	0	381
10:00	0	293	80	0	6	4	2	0	3	0	0	0	0	0	0	388
11:00	1	390	73	0	2	4	1	0	2	0	1	0	1	0	0	475
12:00	2	465	105	0	1	2	1	2	1	0	0	1	0	0	0	580
13:00	2	510	105	1	4	3	0	0	1	0	0	0	0	0	0	626
14:00	1	443	88	0	4	4	0	1	1	0	0	0	0	0	0	542
15:00	3	445	105	1	3	3	0	0	2	0	1	0	0	0	0	563
16:00	2	579	111	2	3	3	0	1	2	0	0	0	2	0	0	705
17:00	1	529	107	0	3	1	0	2	1	0	0	1	0	0	0	645
18:00	0	505	84	0	1	0	0	0	0	0	0	0	0	0	0	590
19:00	1	363	65	0	1	0	0	0	0	0	0	0	0	0	0	430
20:00	1	250	47	0	0	0	0	0	0	0	0	0	0	0	0	298
21:00	0	176	27	0	0	0	0	1	0	0	0	0	0	0	0	204
22:00	0	103	13	0	0	0	0	0	0	0	0	0	0	0	0	116
23:00	0	79	7	0	0	1	0	0	0	0	0	0	0	0	0	87
24:00	0	37	4	0	0	0	0	0	0	0	0	0	0	0	0	41
DAY TOTAL	14	6026	1209	6	45	38	7	9	20	0	2	3	4	0	0	7383
PERCENTS	0.2%	81.7%	16.4%	0.1%	0.7%	0.6%	0.0%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Passenger Vehicles	98.1%															
Trucks & Buses	1.8%															
AM Times	12:00	12:00	12:00	06:00	09:00	09:00	08:00	09:00	10:00		11:00	08:00	07:00			12:00
AM Peaks	2	465	105	1	7	6	2	2	3		1	1	1			580
PM Times	15:00	16:00	16:00	16:00	13:00	14:00		17:00	15:00		15:00	17:00	16:00			16:00
PM Peaks	3	579	111	2	4	4		2	2		1	1	2			705

State of Pennsylvania Dept. of Trans.
CLASSIFICATION SUMMARY
Wed 4/15/2015

Page: 9

Site Reference: 000000010926
Site ID: 000000000000
Location: SR68WB
Direction:
Lane: 1

File: D0407004.prn
City:
County:

[illegible]

APPENDIX D

AECOM Turning Movement Count Data

AECOM

Foster Plaza 6
681 Andersen Drive
Pittsburgh, PA 15205

File Name : SR 322 and 2nd Ave St
Site Code : 00000000
Start Date : 10/22/2015
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	2nd Ave Northbound					2nd Ave Southbound					Main St (SR 322) Eastbound					Main St (SR 322) Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	2	0	0	2	6	2	1	0	9	4	52	2	0	58	2	70	5	0	77	146
07:15 AM	4	3	0	0	7	5	8	6	1	20	2	45	7	0	54	0	72	8	0	80	161
07:30 AM	27	19	0	0	46	3	18	10	1	32	2	46	4	2	54	3	106	5	0	114	246
07:45 AM	29	19	1	0	49	6	12	5	0	23	6	59	1	0	66	4	129	12	0	145	283
Total	60	43	1	0	104	20	40	22	2	84	14	202	14	2	232	9	377	30	0	416	836
08:00 AM	5	2	1	0	8	3	1	13	0	17	5	64	4	0	73	0	95	15	0	110	208
08:15 AM	5	3	0	0	8	9	0	6	0	15	5	45	2	2	54	1	102	11	0	114	191
08:30 AM	1	4	0	0	5	4	1	7	1	13	5	60	4	0	69	2	95	10	0	107	194
08:45 AM	7	4	1	0	12	3	1	8	0	12	9	45	1	0	55	3	99	13	1	116	195
Total	18	13	2	0	33	19	3	34	1	57	24	214	11	2	251	6	391	49	1	447	788

*** BREAK ***

11:00 AM	3	5	0	0	8	9	2	7	0	18	8	59	3	0	70	1	74	8	0	83	179
11:15 AM	3	5	2	0	10	6	0	3	0	9	5	53	1	0	59	0	95	7	0	102	180
11:30 AM	6	5	1	0	12	7	2	11	0	20	10	54	1	0	65	0	90	3	0	93	190
11:45 AM	4	3	0	0	7	3	0	11	1	15	10	60	2	1	73	1	98	9	0	108	203
Total	16	18	3	0	37	25	4	32	1	62	33	226	7	1	267	2	357	27	0	386	752

*** BREAK ***

04:00 PM	4	4	0	0	8	17	1	13	2	33	15	99	5	0	119	3	91	8	0	102	262
04:15 PM	3	5	0	0	8	9	6	9	4	28	12	85	1	2	100	1	87	8	0	96	232
04:30 PM	6	7	0	2	15	18	4	7	1	30	7	85	4	1	97	2	112	11	0	125	267
04:45 PM	3	8	1	0	12	18	6	7	1	32	2	73	4	3	82	2	91	16	0	109	235
Total	16	24	1	2	43	62	17	36	8	123	36	342	14	6	398	8	381	43	0	432	996
Grand Total	110	98	7	2	217	126	64	124	12	326	107	984	46	11	1148	25	1506	149	1	1681	3372
Apprch %	50.7	45.2	3.2	0.9		38.7	19.6	38	3.7		9.3	85.7	4	1		1.5	89.6	8.9	0.1		
Total %	3.3	2.9	0.2	0.1	6.4	3.7	1.9	3.7	0.4	9.7	3.2	29.2	1.4	0.3	34	0.7	44.7	4.4	0	49.9	
Cars	105	95	7	2	209	122	63	122	12	319	101	902	46	11	1060	24	1417	145	1	1587	3175
% Cars	95.5	96.9	100	100	96.3	96.8	98.4	98.4	100	97.9	94.4	91.7	100	100	92.3	96	94.1	97.3	100	94.4	94.2
Heavy Vehicles	5	3	0	0	8	4	1	2	0	7	6	82	0	0	88	1	89	4	0	94	197
% Heavy Vehicles	4.5	3.1	0	0	3.7	3.2	1.6	1.6	0	2.1	5.6	8.3	0	0	7.7	4	5.9	2.7	0	5.6	5.8

	2nd Ave Northbound					2nd Ave Southbound					Main St (SR 322) Eastbound					Main St (SR 322) Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	27	19	0	0	46	3	18	10	1	32	2	46	4	2	54	3	106	5	0	114	246
07:45 AM	29	19	1	0	49	6	12	5	0	23	6	59	1	0	66	4	129	12	0	145	283
08:00 AM	5	2	1	0	8	3	1	13	0	17	5	64	4	0	73	0	95	15	0	110	208
08:15 AM	5	3	0	0	8	9	0	6	0	15	5	45	2	2	54	1	102	11	0	114	191
Total Volume	66	43	2	0	111	21	31	34	1	87	18	214	11	4	247	8	432	43	0	483	928
% App. Total	59.5	38.7	1.8	0		24.1	35.6	39.1	1.1		7.3	86.6	4.5	1.6		1.7	89.4	8.9	0		
PHF	.569	.566	.500	.000	.566	.583	.431	.654	.250	.680	.750	.836	.688	.500	.846	.500	.837	.717	.000	.833	.820

AECOM

Foster Plaza 6
681 Andersen Drive
Pittsburgh, PA 15205

File Name : SR 322 and 2nd Ave St
Site Code : 00000000
Start Date : 10/22/2015
Page No : 2

	2nd Ave Northbound					2nd Ave Southbound					Main St (SR 322) Eastbound					Main St (SR 322) Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:00 AM																					
11:00 AM	3	5	0	0	8	9	2	7	0	18	8	59	3	0	70	1	74	8	0	83	179
11:15 AM	3	5	2	0	10	6	0	3	0	9	5	53	1	0	59	0	95	7	0	102	180
11:30 AM	6	5	1	0	12	7	2	11	0	20	10	54	1	0	65	0	90	3	0	93	190
11:45 AM	4	3	0	0	7	3	0	11	1	15	10	60	2	1	73	1	98	9	0	108	203
Total Volume	16	18	3	0	37	25	4	32	1	62	33	226	7	1	267	2	357	27	0	386	752
% App. Total	43.2	48.6	8.1	0		40.3	6.5	51.6	1.6		12.4	84.6	2.6	0.4		0.5	92.5	7	0		
PHF	.667	.900	.375	.000	.771	.694	.500	.727	.250	.775	.825	.942	.583	.250	.914	.500	.911	.750	.000	.894	.926

Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	4	4	0	0	8	17	1	13	2	33	15	99	5	0	119	3	91	8	0	102	262
04:15 PM	3	5	0	0	8	9	6	9	4	28	12	85	1	2	100	1	87	8	0	96	232
04:30 PM	6	7	0	2	15	18	4	7	1	30	7	85	4	1	97	2	112	11	0	125	267
04:45 PM	3	8	1	0	12	18	6	7	1	32	2	73	4	3	82	2	91	16	0	109	235
Total Volume																					
% App. Total	37.2	55.8	2.3	4.7		50.4	13.8	29.3	6.5		9	85.9	3.5	1.5		1.9	88.2	10	0		
PHF	.667	.750	.250	.250	.717	.861	.708	.692	.500	.932	.600	.864	.700	.500	.836	.667	.850	.672	.000	.864	.933

AECOM
Foster Plaza 6
681 Andersen Drive
Pittsburgh, PA 15205

File Name : SR 68 and Main St
Site Code :
Start Date : 10/22/2015
Page No : 1

Groups Printed- Cars - Heavy Vehicles - Bicycles

Start Time	SR 68 Northbound					SR 68 Southbound					SR 322 (Main St) Eastbound					SR 322 (Main St) Westbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
07:00 AM	8	5	15	0	28	12	9	3	1	25	1	47	20	1	69	10	45	6	1	62	184
07:15 AM	11	7	27	1	46	8	20	3	5	36	0	64	31	0	95	7	49	2	0	58	235
07:30 AM	14	18	15	0	47	14	25	2	0	41	1	88	28	0	117	12	59	4	0	75	280
07:45 AM	23	11	10	0	44	12	16	4	2	34	1	119	34	0	154	13	78	2	1	94	326
Total	56	41	67	1	165	46	70	12	8	136	3	318	113	1	435	42	231	14	2	289	1025
08:00 AM	27	9	9	1	46	6	17	5	4	32	0	72	38	0	110	22	60	7	2	91	279
08:15 AM	18	13	8	2	41	15	16	5	5	41	2	78	26	0	106	11	53	2	5	71	259
08:30 AM	27	17	21	0	65	8	9	2	3	22	2	60	43	1	106	19	54	6	2	81	274
08:45 AM	16	9	14	1	40	8	22	3	1	34	4	81	22	0	107	9	50	3	0	62	243
Total	88	48	52	4	192	37	64	15	13	129	8	291	129	1	429	61	217	18	9	305	1055
*** BREAK ***																					
11:00 AM	26	14	23	3	66	9	7	3	2	21	5	55	45	0	105	35	53	8	1	97	289
11:15 AM	19	21	35	0	75	10	15	4	0	29	2	63	31	1	97	34	52	5	0	91	292
11:30 AM	25	17	34	0	76	9	22	6	1	38	6	84	34	0	124	17	53	9	0	79	317
11:45 AM	27	15	49	1	92	17	21	3	4	45	2	84	33	0	119	33	42	8	1	84	340
Total	97	67	141	4	309	45	65	16	7	133	15	286	143	1	445	119	200	30	2	351	1238
*** BREAK ***																					
04:00 PM	42	26	32	6	106	11	23	2	2	38	6	90	28	0	124	36	100	12	0	148	416
04:15 PM	35	16	31	1	83	12	24	3	1	40	5	83	27	0	115	27	89	6	0	122	360
04:30 PM	26	30	38	6	100	8	26	4	3	41	2	94	31	1	128	34	76	12	1	123	392
04:45 PM	24	30	36	5	95	16	33	3	4	56	5	78	27	0	110	29	80	10	2	121	382
Total	127	102	137	18	384	47	106	12	10	175	18	345	113	1	477	126	345	40	3	514	1550
Grand Total	368	258	397	27	1050	175	305	55	38	573	44	1240	498	4	1786	348	993	102	16	1459	4868
Apprch %	35	24.6	37.8	2.6		30.5	53.2	9.6	6.6		2.5	69.4	27.9	0.2		23.9	68.1	7	1.1		
Total %	7.6	5.3	8.2	0.6	21.6	3.6	6.3	1.1	0.8	11.8	0.9	25.5	10.2	0.1	36.7	7.1	20.4	2.1	0.3	30	
Cars	356	257	382	26	1021	171	301	48	38	558	41	1176	479	4	1700	326	927	98	16	1367	4646
% Cars	96.7	99.6	96.2	96.3	97.2	97.7	98.7	87.3	100	97.4	93.2	94.8	96.2	100	95.2	93.7	93.4	96.1	100	93.7	95.4
Heavy Vehicles	12	1	15	1	29	4	4	7	0	15	3	63	19	0	85	22	65	4	0	91	220
% Heavy Vehicles	3.3	0.4	3.8	3.7	2.8	2.3	1.3	12.7	0	2.6	6.8	5.1	3.8	0	4.8	6.3	6.5	3.9	0	6.2	4.5
Bicycles	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	2
% Bicycles	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0.1	0	0.1	0	0	0.1	0

AECOM
Foster Plaza 6
681 Andersen Drive
Pittsburgh, PA 15205

File Name : SR 68 and Main St
Site Code :
Start Date : 10/22/2015
Page No : 2

	SR 68 Northbound					SR 68 Southbound					SR 322 (Main St) Eastbound					SR 322 (Main St) Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	14	18	15	0	47	14	25	2	0	41	1	88	28	0	117	12	59	4	0	75	280
07:45 AM	23	11	10	0	44	12	16	4	2	34	1	119	34	0	154	13	78	2	1	94	326
08:00 AM	27	9	9	1	46	6	17	5	4	32	0	72	38	0	110	22	60	7	2	91	279
08:15 AM	18	13	8	2	41	15	16	5	5	41	2	78	26	0	106	11	53	2	5	71	259
Total Volume	82	51	42	3	178	47	74	16	11	148	4	357	126	0	487	58	250	15	8	331	1144
% App. Total	46.1	28.7	23.6	1.7		31.8	50	10.8	7.4		0.8	73.3	25.9	0		17.5	75.5	4.5	2.4		
PHF	.759	.708	.700	.375	.947	.783	.740	.800	.550	.902	.500	.750	.829	.000	.791	.659	.801	.536	.400	.880	.877

Peak Hour Analysis From 11:00 AM to 11:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 11:00 AM

11:00 AM	26	14	23	3	66	9	7	3	2	21	5	55	45	0	105	35	53	8	1	97	289
11:15 AM	19	21	35	0	75	10	15	4	0	29	2	63	31	1	97	34	52	5	0	91	292
11:30 AM	25	17	34	0	76	9	22	6	1	38	6	84	34	0	124	17	53	9	0	79	317
11:45 AM	27	15	49	1	92	17	21	3	4	45	2	84	33	0	119	33	42	8	1	84	340
Total Volume	97	67	141	4	309	45	65	16	7	133	15	286	143	1	445	119	200	30	2	351	1238
% App. Total	31.4	21.7	45.6	1.3		33.8	48.9	12	5.3		3.4	64.3	32.1	0.2		33.9	57	8.5	0.6		
PHF	.898	.798	.719	.333	.840	.662	.739	.667	.438	.739	.625	.851	.794	.250	.897	.850	.943	.833	.500	.905	.910

Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:00 PM

04:00 PM	42	26	32	6	106	11	23	2	2	38	6	90	28	0	124	36	100	12	0	148	416
04:15 PM	35	16	31	1	83	12	24	3	1	40	5	83	27	0	115	27	89	6	0	122	360
04:30 PM	26	30	38	6	100	8	26	4	3	41	2	94	31	1	128	34	76	12	1	123	392
04:45 PM	24	30	36	5	95	16	33	3	4	56	5	78	27	0	110	29	80	10	2	121	382
Total Volume	127	102	137	18	384	47	106	12	10	175	18	345	113	1	477	126	345	40	3	514	1550
% App. Total	33.1	26.6	35.7	4.7		26.9	60.6	6.9	5.7		3.8	72.3	23.7	0.2		24.5	67.1	7.8	0.6		
PHF	.756	.850	.901	.750	.906	.734	.803	.750	.625	.781	.750	.918	.911	.250	.932	.875	.863	.833	.375	.868	.931

AECOM

Foster Plaza 6
681 Andersen Drive
Pittsburgh, PA 15205

File Name : SR 68 and Perkins Dr
Site Code : 00000000
Start Date : 10/20/2015
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Perkins Dr Eastbound					Perkins Dr Westbound					SR 68 Northbound					SR 68 Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
11:00 AM	40	6	42	0	88	8	7	1	0	16	45	48	4	0	97	6	42	25	0	73	274
11:15 AM	47	7	44	0	98	6	9	0	0	15	43	46	2	0	91	6	36	39	0	81	285
11:30 AM	52	7	53	0	112	7	9	1	0	17	58	40	1	0	99	7	49	41	0	97	325
11:45 AM	36	10	61	0	107	12	13	3	0	28	52	55	6	0	113	12	52	41	1	106	354
Total	175	30	200	0	405	33	38	5	0	76	198	189	13	0	400	31	179	146	1	357	1238

*** BREAK ***

04:00 PM	60	4	78	0	142	31	8	1	0	40	44	80	6	0	130	10	71	52	0	133	445
04:15 PM	67	9	82	0	158	13	5	1	0	19	34	66	3	0	103	7	65	62	0	134	414
04:30 PM	43	4	89	0	136	8	4	0	0	12	42	49	0	0	91	12	93	50	0	155	394
04:45 PM	47	9	65	0	121	15	4	0	0	19	44	57	1	0	102	10	72	49	0	131	373
Total	217	26	314	0	557	67	21	2	0	90	164	252	10	0	426	39	301	213	0	553	1626
Grand Total	392	56	514	0	962	100	59	7	0	166	362	441	23	0	826	70	480	359	1	910	2864
Apprch %	40.7	5.8	53.4	0		60.2	35.5	4.2	0		43.8	53.4	2.8	0		7.7	52.7	39.5	0.1		
Total %	13.7	2	17.9	0	33.6	3.5	2.1	0.2	0	5.8	12.6	15.4	0.8	0	28.8	2.4	16.8	12.5	0	31.8	
Cars	388	56	511	0	955	98	59	7	0	164	352	431	23	0	806	67	464	357	1	889	2814
% Cars	99	100	99.4	0	99.3	98	100	100	0	98.8	97.2	97.7	100	0	97.6	95.7	96.7	99.4	100	97.7	98.3
Heavy Vehicles	4	0	3	0	7	2	0	0	0	2	10	10	0	0	20	3	16	2	0	21	50
% Heavy Vehicles	1	0	0.6	0	0.7	2	0	0	0	1.2	2.8	2.3	0	0	2.4	4.3	3.3	0.6	0	2.3	1.7

	Perkins Dr Eastbound					Perkins Dr Westbound					SR 68 Northbound					SR 68 Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 12:00 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:00 AM																					
11:00 AM	40	6	42	0	88	8	7	1	0	16	45	48	4	0	97	6	42	25	0	73	274
11:15 AM	47	7	44	0	98	6	9	0	0	15	43	46	2	0	91	6	36	39	0	81	285
11:30 AM	52	7	53	0	112	7	9	1	0	17	58	40	1	0	99	7	49	41	0	97	325
11:45 AM	36	10	61	0	107	12	13	3	0	28	52	55	6	0	113	12	52	41	1	106	354
Total Volume	175	30	200	0	405	33	38	5	0	76	198	189	13	0	400	31	179	146	1	357	1238
% App. Total	43.2	7.4	49.4	0		43.4	50	6.6	0		49.5	47.2	3.2	0		8.7	50.1	40.9	0.3		
PHF	.841	.750	.820	.000	.904	.688	.731	.417	.000	.679	.853	.859	.542	.000	.885	.646	.861	.890	.250	.842	.874

Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:00 PM

04:00 PM	60	4	78	0	142	31	8	1	0	40	44	80	6	0	130	10	71	52	0	133	445
04:15 PM	67	9	82	0	158	13	5	1	0	19	34	66	3	0	103	7	65	62	0	134	414
04:30 PM	43	4	89	0	136	8	4	0	0	12	42	49	0	0	91	12	93	50	0	155	394
04:45 PM	47	9	65	0	121	15	4	0	0	19	44	57	1	0	102	10	72	49	0	131	373
Total Volume	39	4.7	56.4	0		74.4	23.3	2.2	0		38.5	59.2	2.3	0		7.1	54.4	38.5	0		
% App. Total	39	4.7	56.4	0		74.4	23.3	2.2	0		38.5	59.2	2.3	0		7.1	54.4	38.5	0		
PHF	.810	.722	.882	.000	.881	.540	.656	.500	.000	.563	.932	.788	.417	.000	.819	.813	.809	.859	.000	.892	.913

AECOM

Foster Plaza 6
681 Andersen Drive
Pittsburgh, PA 15205

File Name : SR 68 and South St
Site Code :
Start Date : 10/20/2015
Page No : 1

Groups Printed- Cars - Heavy Vehicles - Bicycles

	SR 68 Northbound					SR 68 Southbound					South St Eastbound					South St Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
11:00 AM	6	75	8	1	90	0	75	0	0	75	2	6	5	0	13	28	10	3	1	42	220
11:15 AM	11	76	10	1	98	1	71	0	0	72	1	7	2	0	10	28	8	5	0	41	221
11:30 AM	7	80	6	2	95	0	80	1	0	81	1	3	5	1	10	41	5	8	0	54	240
11:45 AM	6	82	10	0	98	3	77	2	1	83	1	9	8	1	19	34	9	3	1	47	247
Total	30	313	34	4	381	4	303	3	1	311	5	25	20	2	52	131	32	19	2	184	928

*** BREAK ***

04:00 PM	15	115	9	1	140	3	88	0	2	93	1	18	19	1	39	39	20	3	1	63	335
04:15 PM	13	130	14	3	160	3	74	1	2	80	1	15	6	3	25	48	14	4	0	66	331
04:30 PM	7	101	9	3	120	2	70	1	0	73	1	9	15	0	25	57	24	6	3	90	308
04:45 PM	18	90	6	2	116	0	84	1	0	85	1	10	26	0	37	26	12	2	3	43	281
Total	53	436	38	9	536	8	316	3	4	331	4	52	66	4	126	170	70	15	7	262	1255
Grand Total	83	749	72	13	917	12	619	6	5	642	9	77	86	6	178	301	102	34	9	446	2183
Apprch %	9.1	81.7	7.9	1.4		1.9	96.4	0.9	0.8		5.1	43.3	48.3	3.4		67.5	22.9	7.6	2		
Total %	3.8	34.3	3.3	0.6	42	0.5	28.4	0.3	0.2	29.4	0.4	3.5	3.9	0.3	8.2	13.8	4.7	1.6	0.4	20.4	
Cars	83	724	71	13	891	12	606	5	5	628	8	77	81	6	172	298	99	32	9	438	2129
% Cars	100	96.7	98.6	100	97.2	100	97.9	83.3	100	97.8	88.9	100	94.2	100	96.6	99	97.1	94.1	100	98.2	97.5
Heavy Vehicles	0	25	1	0	26	0	13	1	0	14	1	0	5	0	6	3	3	2	0	8	54
% Heavy Vehicles	0	3.3	1.4	0	2.8	0	2.1	16.7	0	2.2	11.1	0	5.8	0	3.4	1	2.9	5.9	0	1.8	2.5
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	SR 68 Northbound					SR 68 Southbound					South St Eastbound					South St Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:00 AM																					
11:00 AM	6	75	8	1	90	0	75	0	0	75	2	6	5	0	13	28	10	3	1	42	220
11:15 AM	11	76	10	1	98	1	71	0	0	72	1	7	2	0	10	28	8	5	0	41	221
11:30 AM	7	80	6	2	95	0	80	1	0	81	1	3	5	1	10	41	5	8	0	54	240
11:45 AM	6	82	10	0	98	3	77	2	1	83	1	9	8	1	19	34	9	3	1	47	247
Total Volume	30	313	34	4	381	4	303	3	1	311	5	25	20	2	52	131	32	19	2	184	928
% App. Total	7.9	82.2	8.9	1		1.3	97.4	1	0.3		9.6	48.1	38.5	3.8		71.2	17.4	10.3	1.1		
PHF	.682	.954	.850	.500	.972	.333	.947	.375	.250	.937	.625	.694	.625	.500	.684	.799	.800	.594	.500	.852	.939

Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:00 PM

04:00 PM	15	115	9	1	140	3	88	0	2	93	1	18	19	1	39	39	20	3	1	63	335
04:15 PM	13	130	14	3	160	3	74	1	2	80	1	15	6	3	25	48	14	4	0	66	331
04:30 PM	7	101	9	3	120	2	70	1	0	73	1	9	15	0	25	57	24	6	3	90	308
04:45 PM	18	90	6	2	116	0	84	1	0	85	1	10	26	0	37	26	12	2	3	43	281
Total Volume																					
% App. Total	9.9	81.3	7.1	1.7		2.4	95.5	0.9	1.2		3.2	41.3	52.4	3.2		64.9	26.7	5.7	2.7		
PHF	.736	.838	.679	.750	.838	.667	.898	.750	.500	.890	1.00	.722	.635	.333	.808	.746	.729	.625	.583	.728	.937

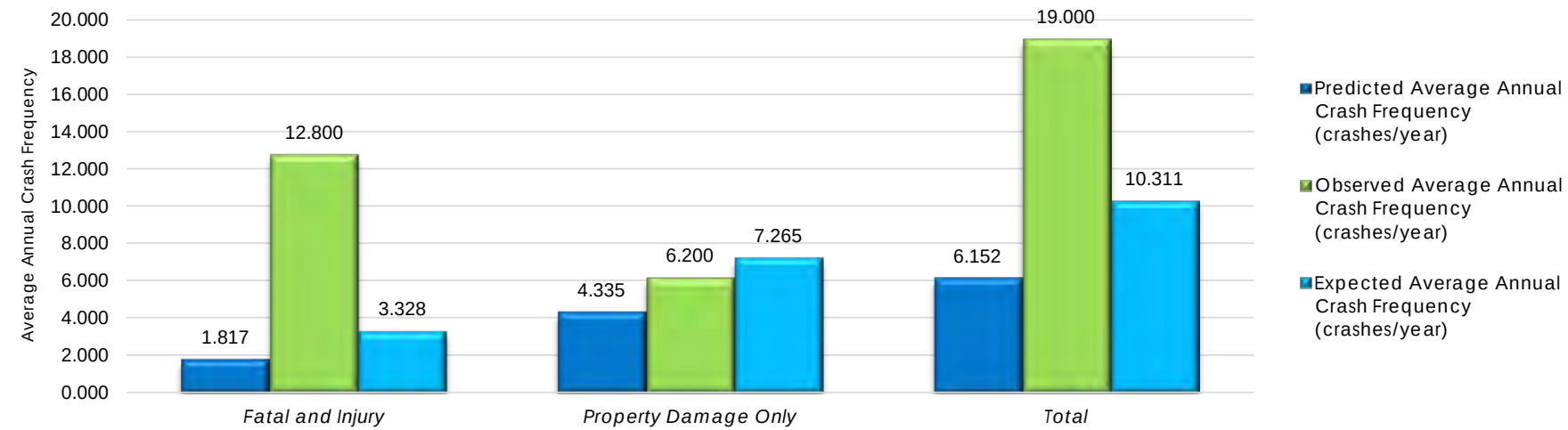
APPENDIX E

Crash Analysis

Project Safety Performance Summary Report

Project Description	Clarion
Date	12/7/2015
Analysis Year	2015
Analysis Type	Site Level Analysis
Facility Type(s)	Urban/Suburban Arterials

Summary of Average Safety Performance for the Project (crashes/year)



Project Totals	<i>Fatal and Injury Crashes</i>	<i>Property Damage Only Crashes</i>	<i>Total Crashes</i>
Predicted Average Annual Crash Frequency	1.817	4.335	6.152
Observed Average Annual Crash Frequency	12.800	6.200	19.000
Expected Average Annual Crash Frequency	3.328	7.265	10.311
Potential for Safety Improvement (PSI)	1.510	2.931	4.159

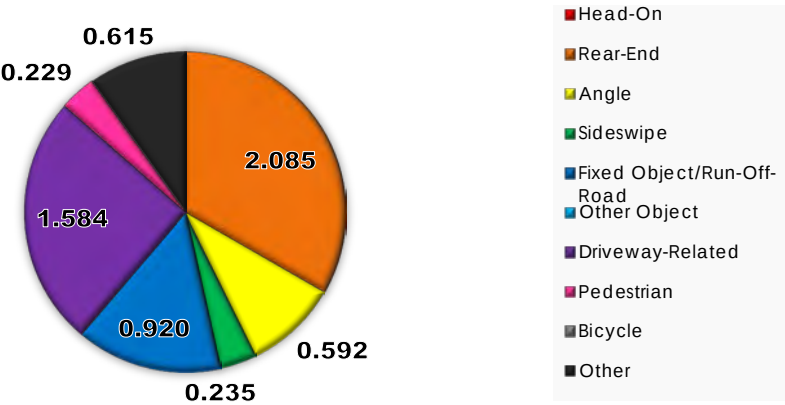
Total Project Summary

<u>Segments</u>	<i>Fatal and Injury</i>	<i>Property Damage Only</i>	<i>Total</i>
Predicted Average Annual Crash Frequency (crashes/yr)	1.27	3.10	4.37
Observed Average Annual Crash Frequency (crashes/yr)	12	6	18
Expected Average Annual Crash Frequency (crashes/yr)	2.47	6.02	8.49

<u>Intersections</u>	<i>Fatal and Injury</i>	<i>Property Damage Only</i>	<i>Total</i>
Predicted Average Annual Crash Frequency (crashes/yr)	0.55	0.55	1.78
Observed Average Annual Crash Frequency (crashes/yr)	1	0	1
Expected Average Annual Crash Frequency (crashes/yr)	0.56	0.56	1.82

<u>Total</u>	<i>Fatal and Injury</i>	<i>Property Damage Only</i>	<i>Total</i>
Predicted Average Annual Crash Frequency (crashes/yr)	1.82	4.33	6.15
Observed Average Annual Crash Frequency (crashes/yr)	13	6	19
Expected Average Annual Crash Frequency (crashes/yr)	3.33	7.27	10.31

Project Total: Predicted Crashes by Crash Type



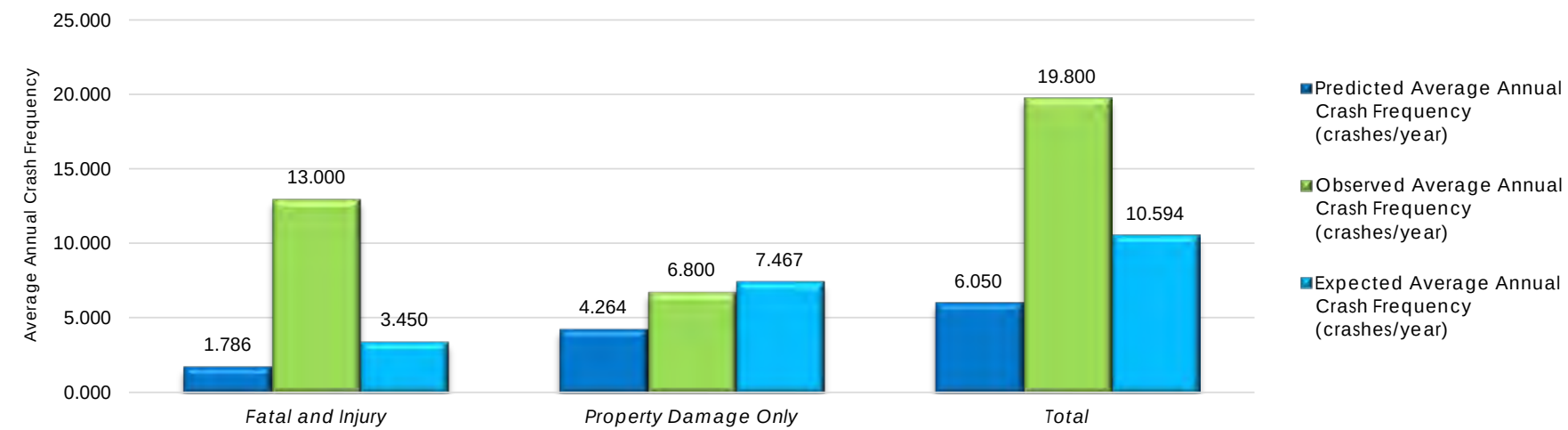
Project Total: Observed Crashes by Crash Type



Project Safety Performance Summary Report

Project Description	Clarion
Date	12/7/2015
Analysis Year	2015
Analysis Type	Site Level Analysis
Facility Type(s)	Urban/Suburban Arterials

Summary of Average Safety Performance for the Project (crashes/year)



Project Totals	<i>Fatal and Injury Crashes</i>	<i>Property Damage Only Crashes</i>	<i>Total Crashes</i>
Predicted Average Annual Crash Frequency	1.786	4.264	6.050
Observed Average Annual Crash Frequency	13.000	6.800	19.800
Expected Average Annual Crash Frequency	3.450	7.467	10.594
Potential for Safety Improvement (PSI)	1.664	3.203	4.544

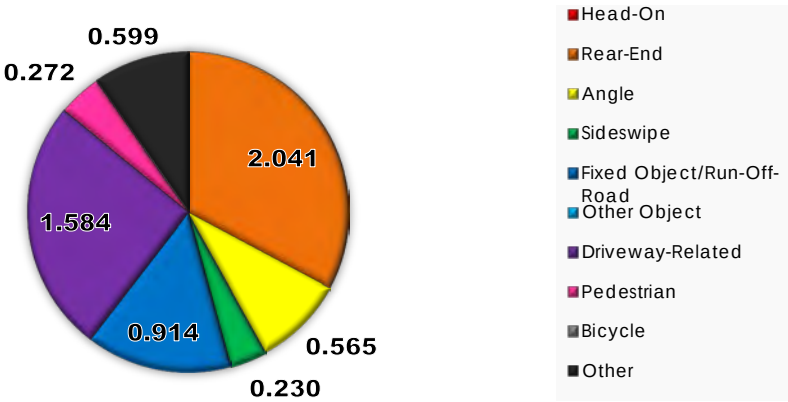
Total Project Summary

<u>Segments</u>	<i>Fatal and Injury</i>	<i>Property Damage Only</i>	<i>Total</i>
Predicted Average Annual Crash Frequency (crashes/yr)	1.27	3.10	4.37
Observed Average Annual Crash Frequency (crashes/yr)	12	6	18
Expected Average Annual Crash Frequency (crashes/yr)	2.47	6.02	8.49

<u>Intersections</u>	<i>Fatal and Injury</i>	<i>Property Damage Only</i>	<i>Total</i>
Predicted Average Annual Crash Frequency (crashes/yr)	0.52	0.52	1.68
Observed Average Annual Crash Frequency (crashes/yr)	1	1	2
Expected Average Annual Crash Frequency (crashes/yr)	0.64	0.64	2.10

<u>Total</u>	<i>Fatal and Injury</i>	<i>Property Damage Only</i>	<i>Total</i>
Predicted Average Annual Crash Frequency (crashes/yr)	1.79	4.26	6.05
Observed Average Annual Crash Frequency (crashes/yr)	13	7	20
Expected Average Annual Crash Frequency (crashes/yr)	3.45	7.47	10.59

Project Total: Predicted Crashes by Crash Type



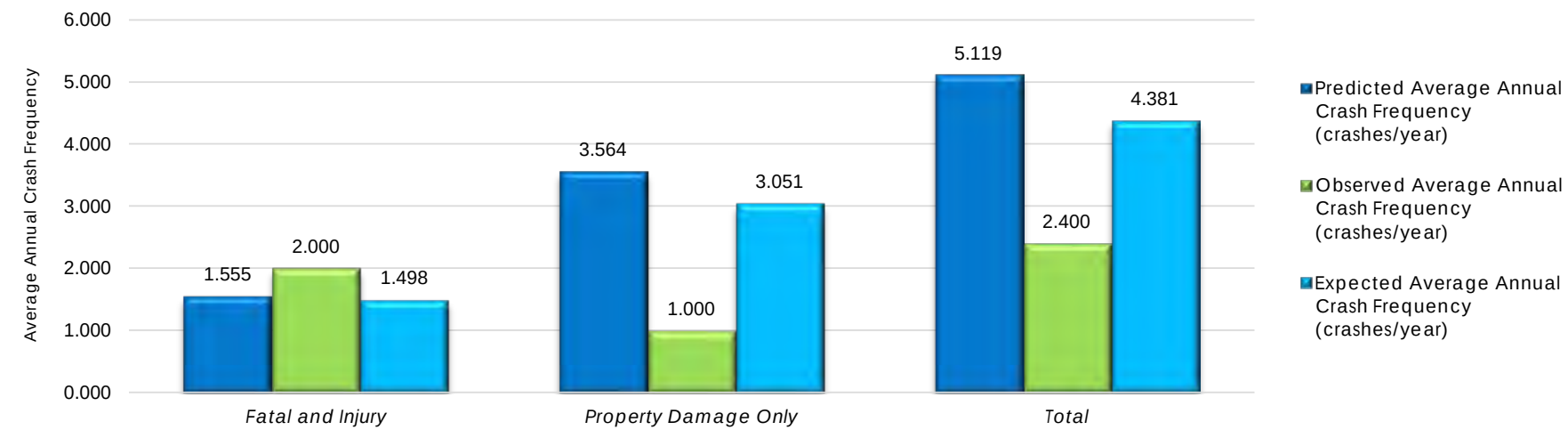
Project Total: Observed Crashes by Crash Type



Project Safety Performance Summary Report

Project Description	Clarion
Date	12/7/2015
Analysis Year	2015
Analysis Type	Site Level Analysis
Facility Type(s)	Urban/Suburban Arterials

Summary of Average Safety Performance for the Project (crashes/year)



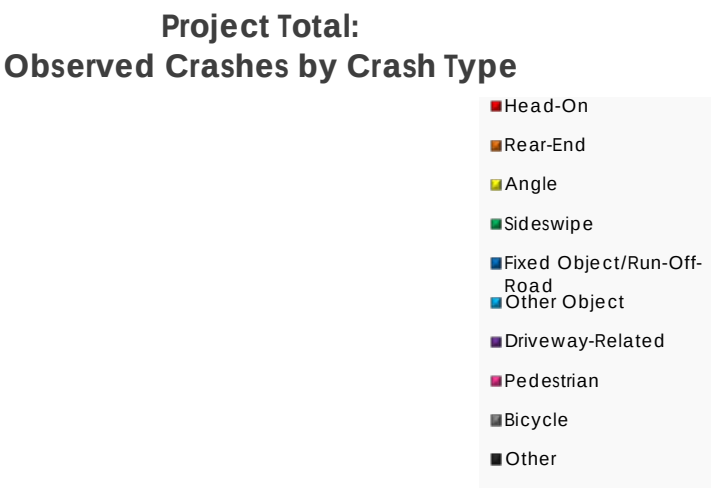
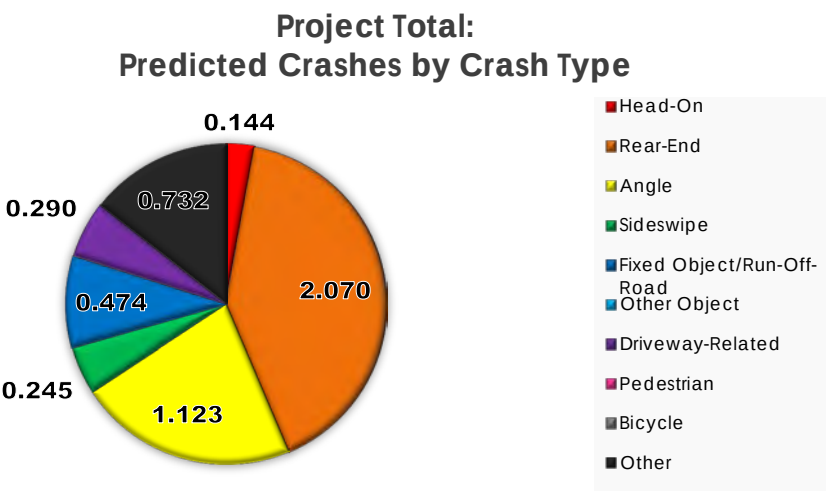
Project Totals	<i>Fatal and Injury Crashes</i>	<i>Property Damage Only Crashes</i>	<i>Total Crashes</i>
Predicted Average Annual Crash Frequency	1.555	3.564	5.119
Observed Average Annual Crash Frequency	2.000	1.000	2.400
Expected Average Annual Crash Frequency	1.498	3.051	4.381
Potential for Safety Improvement (PSI)	-0.056	-0.514	-0.738

Total Project Summary

<u>Segments</u>	<i>Fatal and Injury</i>	<i>Property Damage Only</i>	<i>Total</i>
Predicted Average Annual Crash Frequency (crashes/yr)	0.15	0.46	0.61
Observed Average Annual Crash Frequency (crashes/yr)	1	0	0
Expected Average Annual Crash Frequency (crashes/yr)	0.12	0.38	0.51

<u>Intersections</u>	<i>Fatal and Injury</i>	<i>Property Damage Only</i>	<i>Total</i>
Predicted Average Annual Crash Frequency (crashes/yr)	1.41	1.41	4.51
Observed Average Annual Crash Frequency (crashes/yr)	1	1	2
Expected Average Annual Crash Frequency (crashes/yr)	1.21	1.21	3.87

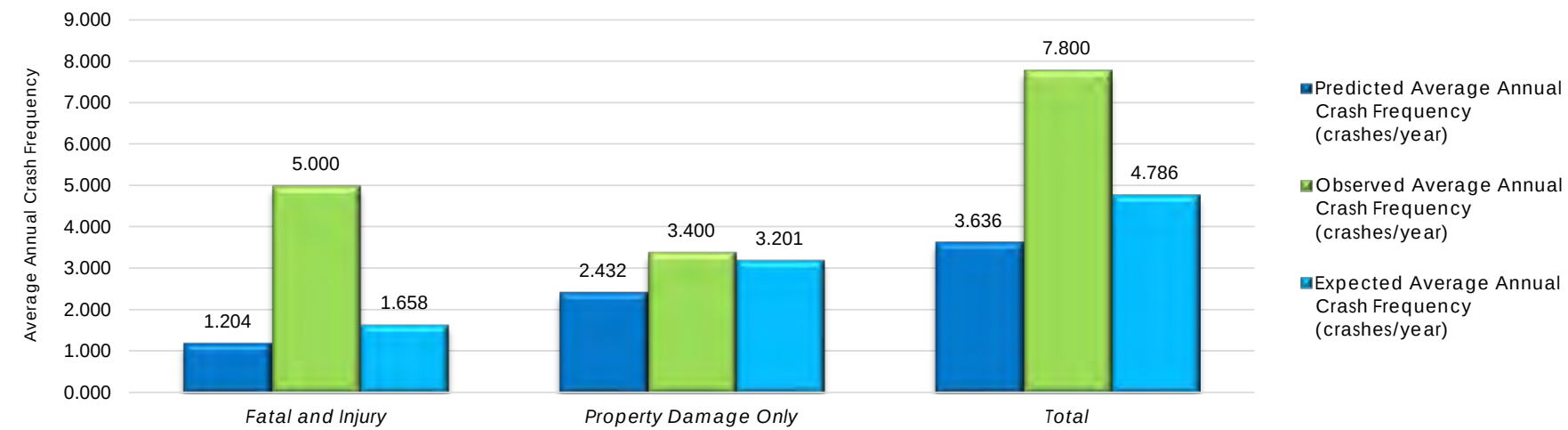
<u>Total</u>	<i>Fatal and Injury</i>	<i>Property Damage Only</i>	<i>Total</i>
Predicted Average Annual Crash Frequency (crashes/yr)	1.55	3.56	5.12
Observed Average Annual Crash Frequency (crashes/yr)	2	1	2
Expected Average Annual Crash Frequency (crashes/yr)	1.50	3.05	4.38



Project Safety Performance Summary Report

Project Description	Clarion
Date	12/7/2015
Analysis Year	2015
Analysis Type	Site Level Analysis
Facility Type(s)	Urban/Suburban Arterials

Summary of Average Safety Performance for the Project (crashes/year)



Project Totals	<i>Fatal and Injury Crashes</i>	<i>Property Damage Only Crashes</i>	<i>Total Crashes</i>
Predicted Average Annual Crash Frequency	1.204	2.432	3.636
Observed Average Annual Crash Frequency	5.000	3.400	7.800
Expected Average Annual Crash Frequency	1.658	3.201	4.786
Potential for Safety Improvement (PSI)	0.454	0.769	1.150

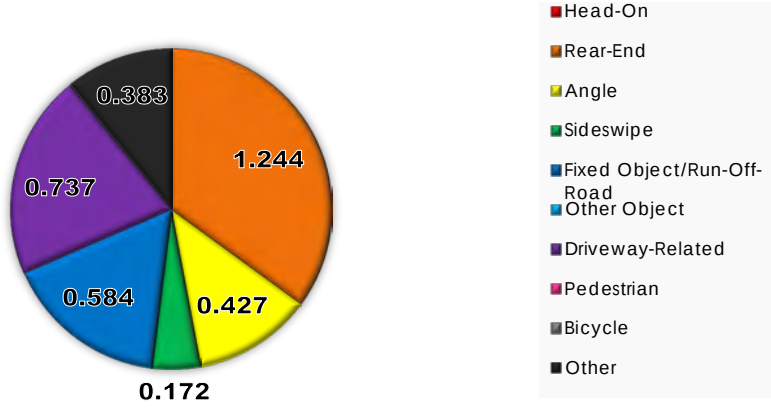
Total Project Summary

<u>Segments</u>	<i>Fatal and Injury</i>	<i>Property Damage Only</i>	<i>Total</i>
Predicted Average Annual Crash Frequency (crashes/yr)	0.63	1.57	2.20
Observed Average Annual Crash Frequency (crashes/yr)	4	3	6
Expected Average Annual Crash Frequency (crashes/yr)	0.93	2.31	3.23

<u>Intersections</u>	<i>Fatal and Injury</i>	<i>Property Damage Only</i>	<i>Total</i>
Predicted Average Annual Crash Frequency (crashes/yr)	0.57	0.57	1.43
Observed Average Annual Crash Frequency (crashes/yr)	1	1	2
Expected Average Annual Crash Frequency (crashes/yr)	0.62	0.62	1.55

<u>Total</u>	<i>Fatal and Injury</i>	<i>Property Damage Only</i>	<i>Total</i>
Predicted Average Annual Crash Frequency (crashes/yr)	1.20	2.43	3.64
Observed Average Annual Crash Frequency (crashes/yr)	5	3	8
Expected Average Annual Crash Frequency (crashes/yr)	1.66	3.20	4.79

Project Total: Predicted Crashes by Crash Type



Project Total: Observed Crashes by Crash Type



APPENDIX F

LOS Criteria

Level-of-Service (LOS) Criteria

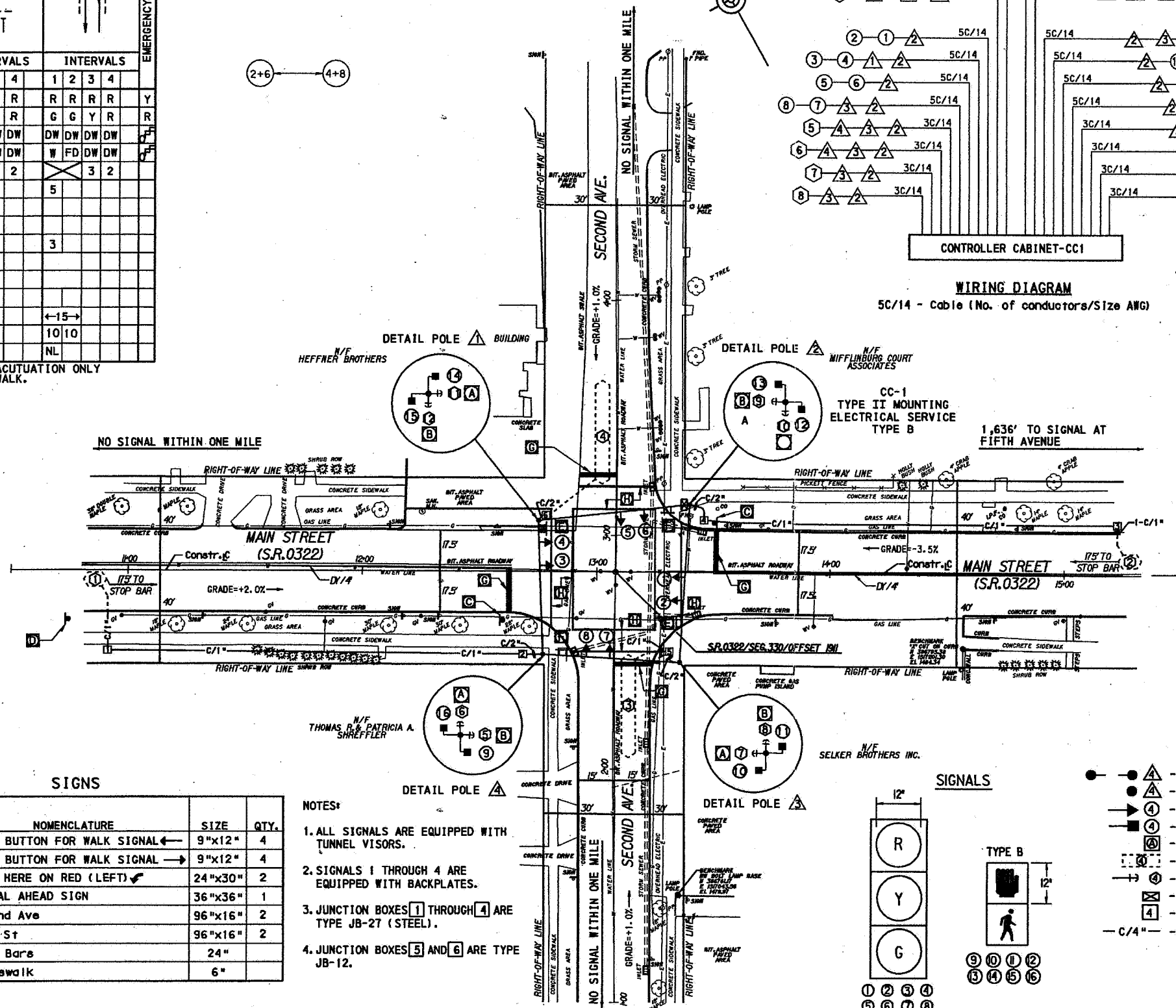
Signalized Intersections	
LOS	Delay per Vehicle (seconds)
A	Less than 10
B	Between 10 and 20
C	Between 20 and 35
D	Between 35 and 55
E	Between 55 and 80
F	Greater than 80
Unsignalized Intersections	
LOS	Delay per Vehicle (seconds)
A	Less than 10
B	Between 10 and 15
C	Between 15 and 25
D	Between 25 and 35
E	Between 35 and 50
F	Greater than 50

APPENDIX G

Signal Permit Drawings

SIGNALS	PHASE 2+6				PHASE 4+8				EMERGENCY FLASHING
	INTERVALS	INTERVALS							
1 2 3 4	1	2	3	4	1	2	3	4	
①②③④	G	G	Y	R	R	R	R	R	Y
⑤⑥⑦⑧	R	R	R	R	G	G	Y	R	R
*⑨⑩⑪⑫⑬⑭	W	FD	DW	DW	DW	DW	DW	DW	FF
*①①②③④⑤⑥	DW	DW	DW	DW	W	FD	DW	DW	FF
FIXED			3	2			3	2	
MINIMUM	15				5				
ADD. INITIAL	2								
MAX. INITIAL	20								
PASSAGE	6				3				
TTR	←10→								
TBR	←15→								
MIN. GAP	3								
MAXIMUM	←50→				←15→				
PEDESTRIAN *	9	9			10	10			
MEMORY	MN				NL				



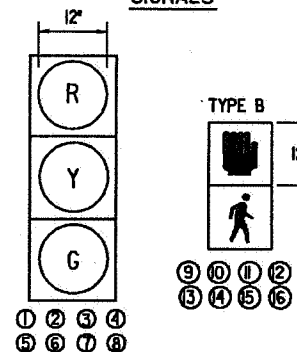


SIGN	STANDARD	NOMENCLATURE	SIZE	QTY.
(A)	R10-4	PUSH BUTTON FOR WALK SIGNAL ←	9"x12"	4
(B)	R10-4	PUSH BUTTON FOR WALK SIGNAL →	9"x12"	4
(C)	R10-6L	STOP HERE ON RED (LEFT) ↙	24"x30"	2
(D)	W3-3	SIGNAL AHEAD SIGN	36"x36"	1
(E)	D3-4*	Second Ave	96"x16"	2
(F)	D3-4*	Main St	96"x16"	2
(G)	PVT. MKG.	Stop Bars	24"	
(H)	PVT. MKG.	Crosswalk	6"	

NOTES:

1. ALL SIGNALS ARE EQUIPPED WITH TUNNEL VISORS.
2. SIGNALS 1 THROUGH 4 ARE EQUIPPED WITH BACKPLATES.
3. JUNCTION BOXES [1] THROUGH [4] ARE TYPE JB-27 (STEEL).
4. JUNCTION BOXES [5] AND [6] ARE TYPE JB-12.

SIGNALS



LEGEND

- — ●  - STRAIN POLE/MESSENGER CABLE
-  - PEDESTAL
-  - VEHICULAR SIGNAL HEAD
- ■  - PEDESTRIAN SIGNAL HEAD
-  - SIGN
-  - VEHICLE DETECTOR
-  - PEDESTRIAN PUSH BUTTON/SIGN
-  - CONTROLLER ASSEMBLY
-  - JUNCTION BOX
- C/4" — - CONDUIT/SIZE

PERMIT NO. TS-184-10 SHEET 2 OF 2
DATE ISSUED 02/05/03 DATE REVISED _____

THIS DRAWING CANNOT BE USED AS A CONSTRUCTION DRAWING UNLESS THE PERMITEE COMPLIES WITH THE PROVISIONS OF ACT 187, PREVENTION OF DAMAGE TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION CONSULT WITH UTILITY COMPANIES TO RESOLVE ANY PROBLEMS WHICH MAY BE CREATED DUE TO THE LOCATION OF UTILITIES.

SECOND AVENUE

7/17/03
DATE

11/5/03
DATE

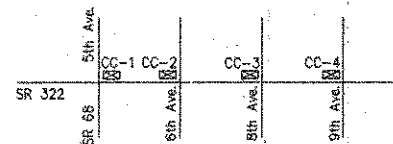
SCALE : 25 0 25 50

PHASING DIAGRAM

	PHASE 4+7				PHASE 4+8				PHASE 2+5				PHASE 2+6				
	1	2	3		1	2	3	4	1	2	3		1	2	3	4	FLASHING
SIGNALS																	
1																	R
2																	R
3-4																	R
5																	R
6-7																	Y
8-9																	Y
18																	OFF
10-11-12-13*																	OFF
14-15-16-17*																	OFF
FIXED																	
MINIMUM																	
PASSAGE																	
PROGRAM 1																	
PROGRAM 2																	
PROGRAM 3																	
MAX I																	
MAX II																	
PEDESTRIAN																	
MEMORY																	

* UPON PEDESTRIAN ACTUATION ONLY

INTERCONNECT PLAN



SIGNS/PAVEMENT MARKINGS

PLAN SYMBOL	DESCRIPTION	SIZE	QTY.
A	LEFT TURN YIELD ON GREEN (R10-12)	30"x36"	1
B	RIGHT TURN SIGNAL (R10-10R)	30"x36"	1
C	MAIN STREET D3-4	46"x16"	2
D	FIFTH AVENUE D3-4	46"x16"	2
E	PUSH BUTTON FOR WALK SIGNAL (R10-4)	9"x12"	4
F	PUSH BUTTON FOR WALK SIGNAL (R10-4)	9"x12"	4
G	LEFT TURN SIGNAL (R10-10L)	30"x36"	1
H	NO TURN ON RED (R10-11)	30"x36"	2
I	LIMIT LINE WHITE PAINT	24"	100 LF
J	CROSSWALK WHITE PAINT	8"	403 LF

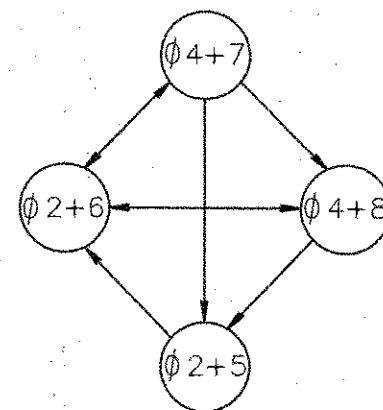
- ① $\frac{Y}{G}$ IF FOLLOWED BY 4+7
 ② $\frac{R}{G}$ IF FOLLOWED BY 4+7

CONTROLLER NOTE:

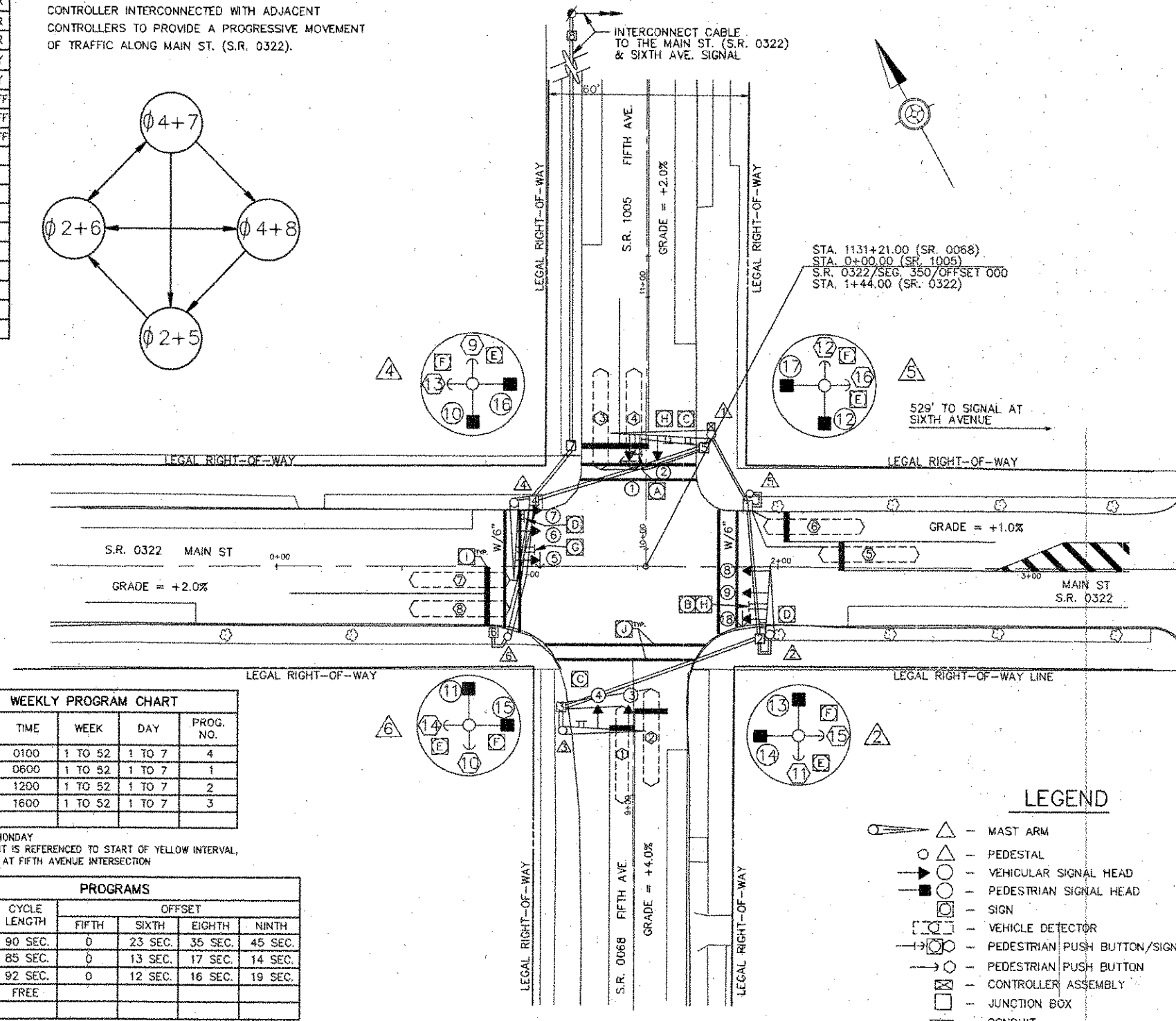
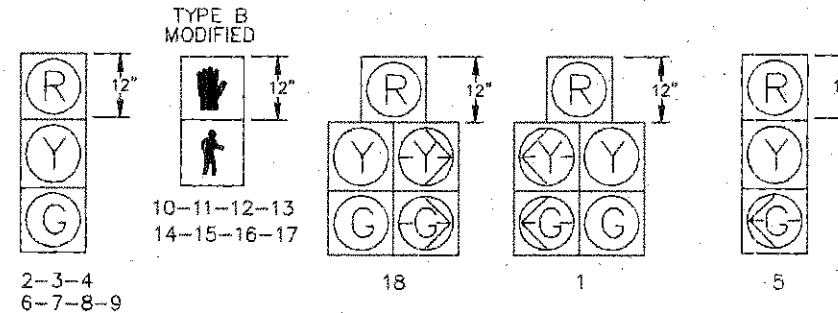
NEMA TS2 TYPE 1 CONTROLLER WITH MANUAL CORD.
 INTERCONNECTED WITH OVERHEAD/UNDERGROUND
 CABLE TO INTERSECTION OF MAIN ST. (S.R. 0322)
 AND SIXTH AVENUE.

INTERCONNECTION NOTE:

CONTROLLER INTERCONNECTED WITH ADJACENT
 CONTROLLERS TO PROVIDE A PROGRESSIVE MOVEMENT
 OF TRAFFIC ALONG MAIN ST. (S.R. 0322).



SIGNAL INDICATIONS



PERMIT NO. T.S.-035-10 SHEET 2 OF 2
 DATE ISSUED 07/07/47 DATE REVISED 1/14/09

GENERAL NOTES

INSTALL, OPERATE AND MAINTAIN THIS TRAFFIC
 SIGNAL IN ACCORDANCE WITH PENNSYLVANIA DEPARTMENT
 OF TRANSPORTATION REGULATIONS ON OFFICIAL TRAFFIC
 CONTROL DEVICES.

NO MODIFICATION OF THIS INSTALLATION IS
 PERMITTED UNLESS PRIOR APPROVAL IS GRANTED, IN
 WRITING, BY THE DEPARTMENT.

ALL MAINTENANCE NECESSARY FOR PROPER
 VISIBILITY OF THE SIGNALS, INCLUDING TRIMMING
 TREES, IS THE RESPONSIBILITY OF THE PERMITTEE.

THE PERMITTEE INSTALLS AND MAINTAINS ALL SIGNS
 AND PAVEMENT MARKINGS INDICATED ON THIS DRAWING
 WHICH ARE CONSIDERED PART OF THE PERMIT, UNLESS
 OTHERWISE INDICATED. THE DEPARTMENT MAINTAINS
 THE LONGITUDINAL PAVEMENT MARKINGS ON STATE
 HIGHWAYS.

INSTALL POST MOUNTED SIGNALS WITH THE SIGNAL
 HEADS A MINIMUM OF 2 FEET BEHIND THE FACE OF THE
 CURB OR EDGE OF THE SHOULDER. ALSO, INSTALL
 SUPPORT POLES FOR OVERHEAD SIGNALS WITH A MINIMUM
 HORIZONTAL CLEARANCE OF 2 FEET.

INSTALL SIGNAL HEADS AND SIGNS ERECTED OVER
 THE ROADWAY WITH THE BOTTOMS NOT LESS THAN 17
 FEET NOR MORE THAN 19 FEET ABOVE THE ROADWAY.

INSTALL POST MOUNTED SIGNAL HEADS WITH BOTTOMS
 NOT LESS THAN 10 FEET NOR MORE THAN 15 FEET ABOVE
 THE SIDEWALK OR PAVEMENT GRADE.

INSTALL SIGNAL HEADS WITH A MINIMUM HORIZONTAL
 DISTANCE OF 8 FEET BETWEEN THE HEADS AS MEASURED
 AT RIGHT ANGLES TO THE APPROACH.

IN ADDITION TO THIS SIGNAL PERMIT, THE
 PERMITTEE MUST OBTAIN A HIGHWAY OCCUPANCY
 PERMIT PRIOR TO ANY OPENINGS BEING MADE IN
 OR UNDER ANY PORTION OF A STATE HIGHWAY.

THIS DRAWING CANNOT BE USED AS A CONSTRUCTION
 DRAWING UNLESS THE PERMITTEE COMPLIES WITH THE
 PROVISIONS OF ACT 181, PREVENTION OF DAMAGE
 TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION
 CONSULT WITH UTILITY COMPANIES TO RESOLVE ANY
 PROBLEMS WHICH MAY BE CREATED DUE TO THE LOCATION
 OF UTILITIES.



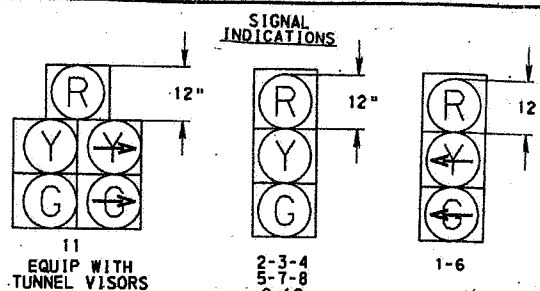
COUNTY: CLARION
 MUNICIPALITY: CLARION BOROUGH
 INTERSECTION: SR 322 (MAIN STREET) AND
 SR 68 / SR 1005 (FIFTH AVENUE)

REVIEWED: *Ray H. Brown* 9/4/09
 MUNICIPAL OFFICIAL *Charles Brown* DATE
 RECOMMENDED: *Paul F. Kopp* 4/6/09
 DISTRICT TRAFFIC ENGINEER DATE

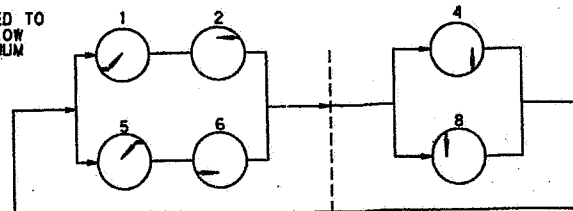
SCALE: 25 0 25 50

PHASING DIAGRAM

	PHASE 1+5			PHASE 1+6			PHASE 2+5			PHASE 2+6			PHASE 4+8			
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	FLASHING
SIGNAL	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	
1	⬅	➡	⬅	⬅	➡	⬅	⬅	➡	⬅	⬅	➡	⬅	⬅	➡	⬅	OFF
6	⬅	➡	⬅	⬅	➡	⬅	⬅	➡	⬅	⬅	➡	⬅	⬅	➡	⬅	OFF
2-3	R	R	R	G	Y	R	R	R	G	Y	R	R	R	R	R	Y
7-8	R	R	R	R	R	R	R	R	G	G	G	G	Y	R	R	Y
4-5-9-10	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	Y
11	R	⬅	➡	R	⬅	➡	R	⬅	➡	R	⬅	➡	R	⬅	➡	R
FIXED		4	2		4	2		4	2		4	2		4	2	
MINIMUM	0			0			0			10			0			
ADDED INIT.										2						
MAX. INITIAL										26						
PASSAGE TO REDUCE	3			3			3			6			3			
BEFORE REDUCTION										10						
MINIMUM GAP										2						
MAXIMUM (FREE FLOW)	25			25			25			40			30			
PROGRAM 2	23			23			23			45			25			
MEMORY		NL			NL			NL			MN			NL		



NOTE: OFFSETS REFERENCED TO BEGINNING OF YELLOW INTERVAL IN MINIMUM RECALL PHASE



WEEKLY PROGRAM CHART											
EVENTS	WEEK	DAY							HOUR	MIN.	SEC.
		S	M	T	W	T	F	S			
1	1 TO 52	X	X	X	X	X	X	X	24	00	00
2		X	X	X	X	X	X	X	6	00	00
3		X	X	X	X	X	X	X	7	00	00
4		X	X	X	X	X	X	X	8	30	00
5		X	X	X	X	X	X	X	15	00	00
6		X	X	X	X	X	X	X	17	30	00

DOUBLE CYCLE ALTERNATE

PROGRAMS							
PROG. NUM.	CYCLE LENGTH	INTERSECTION				OFFSETS	
		EASTBOUND OFF RAMP		WESTBOUND OFF RAMP		PERKINS ROAD (T-790)	CLARION MALL DRIVE AND T-8
1	FLASH						
2	55 (110) SEC.	0 SEC.	55 SEC. *	2 SEC.	57 SEC. *	102 SEC.	100 SEC.
3	FREE FLOW						
4							
* DOUBLE CYCLE ALTERNATE							

DOUBLE CYCLE ALTERNATE

PERMIT NO. TS-095-10 SHEET 2 OF 2
DATE ISSUED 6-3-94 DATE REVISED 4-30-99

GENERAL NOTES

INSTALL, OPERATE AND MAINTAIN THIS TRAFFIC SIGNAL IN ACCORDANCE WITH PENNSYLVANIA DEPARTMENT OF TRANSPORTATION REGULATIONS ON OFFICIAL TRAFFIC CONTROL DEVICES.

NO MODIFICATION OF THIS INSTALLATION IS PERMITTED UNLESS PRIOR APPROVAL IS GRANTED, IN WRITING, BY THE DEPARTMENT.

ALL MAINTENANCE NECESSARY FOR PROPER VISIBILITY OF THE SIGNALS, INCLUDING TRIMMING TREES, IS THE RESPONSIBILITY OF THE PERMITTEE.

THE PERMITTEE INSTALLS AND MAINTAINS ALL SIGNS AND PAVEMENT MARKINGS INDICATED ON THIS DRAWING WHICH ARE CONSIDERED PART OF THE PERMIT, UNLESS OTHERWISE INDICATED. THE DEPARTMENT MAINTAINS THE LONGITUDINAL PAVEMENT MARKINGS ON STATE HIGHWAYS.

INSTALL POST MOUNTED SIGNALS WITH THE SIGNAL HEADS A MINIMUM OF 2 FEET BEHIND THE FACE OF THE CURB OR EDGE OF THE SHOULDER. ALSO, INSTALL SUPPORT POLES FOR OVERHEAD SIGNALS WITH A MINIMUM HORIZONTAL CLEARANCE OF 2 FEET.

INSTALL SIGNAL HEADS AND SIGNS ERECTED OVER THE ROADWAY WITH THE BOTTOMS NOT LESS THAN 17 FEET NOR MORE THAN 19 FEET ABOVE THE ROADWAY.

INSTALL POST MOUNTED SIGNAL HEADS WITH BOTTOMS NOT LESS THAN 8 FEET NOR MORE THAN 15 FEET ABOVE THE SIDEWALK OR PAVEMENT GRADE.

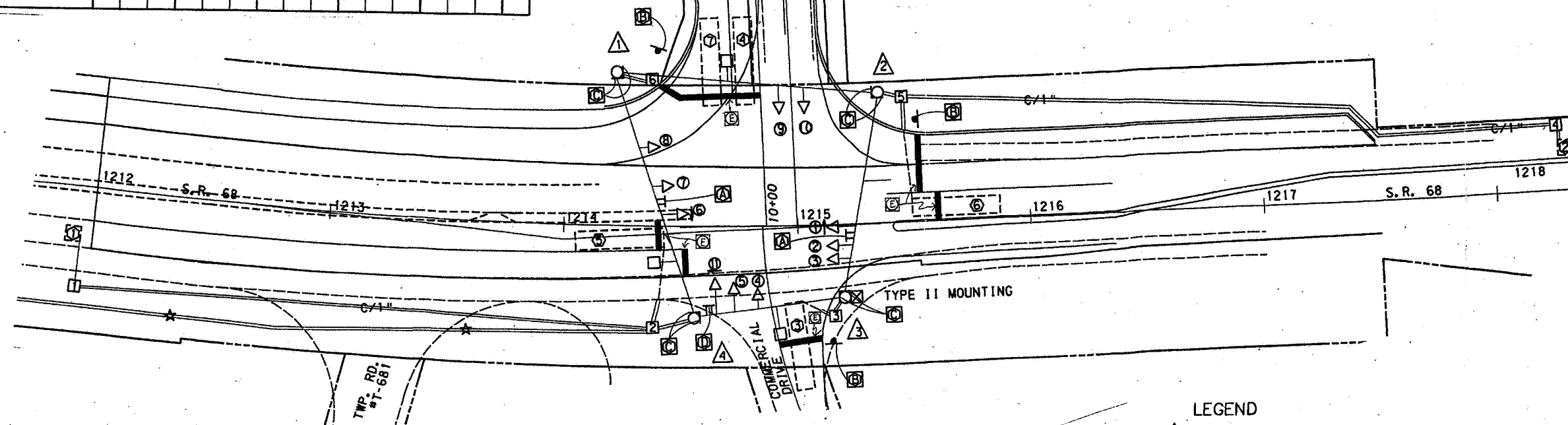
INSTALL SIGNAL HEADS WITH A MINIMUM HORIZONTAL DISTANCE OF 8 FEET BETWEEN THE HEADS AS MEASURED AT RIGHT ANGLES TO THE APPROACH.

IN ADDITION TO THIS SIGNAL PERMIT, THE PERMITTEE MUST OBTAIN A HIGHWAY OCCUPANCY PERMIT PRIOR TO ANY OPENINGS BEING MADE IN OR UNDER ANY PORTION OF A STATE HIGHWAY.

THIS DRAWING CANNOT BE USED AS A CONSTRUCTION DRAWING UNLESS THE PERMITTEE COMPLIES WITH THE PROVISIONS OF ACT 187, PREVENTION OF DAMAGE TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION CONSULT WITH UTILITY COMPANIES TO RESOLVE ANY PROBLEMS WHICH MAY BE CREATED DUE TO THE LOCATION OF UTILITIES.

PROVIDE THE DEPARTMENT WITH THE MANUFACTURER'S NAME, MODEL NO. AND APPROVAL NO. FOR ALL TRAFFIC SIGNAL EQUIPMENT WHICH REQUIRES A DEPARTMENT CERTIFICATE OF APPROVAL.

ARRANGE FOR A DEPARTMENT REPRESENTATIVE TO BE PRESENT WHEN LOCATIONS FOR SUPPORT POLES AND SENSORS ARE DETERMINED.



SIGN/MARKING TABULATION

PLAN SYMBOL	SERIES	SIZE	QUANTITY	MESSAGE
A	R10-10L	30" X 36"	2	LEFT TURN SIGNAL
B	R10-6L	24" X 30"	3	STOP HERE ON RED
C	R9-3	18" X 18"	8	NO PEDESTRIAN CROSSING
D	R10-10R	30" X 36"	1	RIGHT TURN SIGNAL
E	PAINT	24"		LIMIT LINE (WHITE)

EMERGENCY VEHICLE PRE-EMPTION NOTES

- The controller shall be equipped with emergency vehicle pre-emption equipment.
- System is to be activated from the S.R. 68 approaches (Westbound and Eastbound) and Side Street approaches (Eastbound and Westbound).
- Upon pre-emption from an Eastbound S.R. 68 or a Westbound S.R. 68 emergency vehicle, a change interval (6 seconds minimum) shall be provided to clear all conflicting vehicular intervals. Following the clearance intervals, a green indication will be given to the selected Phase 1+5 or 2+5 and red indication given to all other approaches.
- Upon pre-emption from the Side Street, Eastbound or Westbound emergency vehicle, a change interval (6 seconds minimum) shall be provided to clear all conflicting vehicular intervals. Following the clearance intervals, a green indication will be given to the selected Phase 4+8 and red indications given to all other approaches.
- Flashing to emergency vehicle pre-emption. If emergency vehicle pre-emption occurs when the traffic signals are in the flashing operation, the normal flashing operation sequence, as shown in the diagram, shall continue.
- Fail safe indication. When the emergency vehicle has control of the signals, Fail-Safe indication shall be flashing white light on the approach which is pre-empted. This indication shall not be given whether the failure results from a prior pre-emption on another approach, from equipment malfunction, or from any other cause.

LEGEND

- ▲ - Mast Arm
- △ - Strain Pole
- - Pedestal
- ⊙ - Vehicular Signal Head
- ⊙ - Pedestrian Signal Head
- ⊙ - Sign
- ⊙ - Vehicle Detector
- ⊙ - Pedestrian Push Button
- ⊙ - Pedestrian Push Button/Sign
- ⊙ - Controller Assembly

COUNTY : CLARION
MUNICIPALITY : MONROE TOWNSHIP
INTERSECTION : S.R. 68 AND T-790 (PERKINS ROAD) AND COMMERCIAL DRIVE.

REVIEWED : Robert J. Pavin V.C. 6/12/97
MUNICIPAL OFFICIAL DATE

RECOMMENDED : [Signature] 6/25/97
DISTRICT TRAFFIC ENGINEER DATE

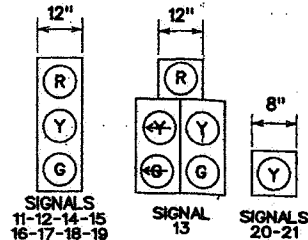
SCALE : 25 0 25

PHASING DIAGRAM

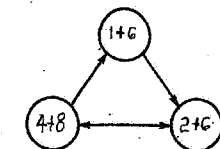
	PHASE 1+6			PHASE 2+6			PHASE 4+8			
										FLASHING
	INTERVAL			INTERVAL			INTERVAL			
SIGNALS	1	2	3	1	2	3	1	2	3	
11,12				G	Y	R				Y
13	G	G	G	G	Y	R				OFF
14,15	G	G	G	G	Y	R				Y
16,17							G	Y	R	
18,19							G	Y	R	R
FIXED		4	2		4	2		3	2	
MINIMUM	0		10			0				
ADDED INIT.			2							
MAX. INIT.			26							
PASSAGE	3		6			3				
TIME TO REDUCE			20							
BEFORE RED			10							
MINIMUM GAP			2							
PROGRAM 2	23		45			25				
MEMORY	NL		MN			NL				
MAX. I (FREE FLOW)	20		40			30				

NOTE: WHERE NO DISPLAY IS INDICATED, SIGNAL SHALL BE CIRCULAR RED.

NOTE: OFFSETS REFERENCED TO BEGINNING OF YELLOW INTERVAL IN MINIMUM RECALL PHASE

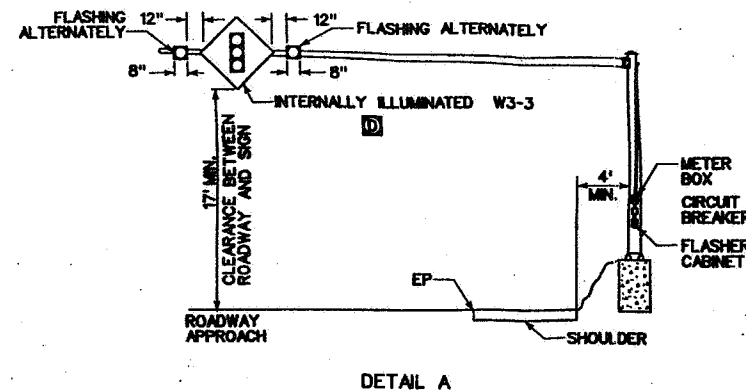


SIGNAL IDENTIFICATION



EMERGENCY VEHICLE PRE-EMPTION NOTES

- The controller shall be equipped with emergency vehicle pre-emption equipment.
- System is to be activated from the S.R. 68 approaches (Westbound and Eastbound) and the wide street approaches (Clarion Mall Drive and T-850.)
- Upon pre-emption from an Eastbound S.R. 68 emergency vehicle, a change interval (6 seconds minimum) shall be provided to clear all conflicting vehicular intervals. Following the clearance intervals, a green indication will be given to the selected Phase 1+6 and red indications given to all other approaches.
- Upon pre-emption from a Westbound S.R. 68 emergency vehicle, a change interval (6 seconds minimum) shall be provided to clear all conflicting vehicular intervals. Following the clearance intervals, a green indication will be given to the selected Phase 2+6 and red indications given to all other approaches.
- Upon pre-emption from either a Clarion Mall Drive emergency vehicle or T-850 emergency vehicle, a change interval (5 seconds) shall be provided to clear all conflicting vehicular intervals. Following the clearance intervals, a green indication will be given to the selected Phase 4+8 and red indications to all other approaches.
- Flashing to emergency vehicle pre-emption. If emergency vehicle pre-emption occurs when the traffic signals are in the flashing operation, the normal flashing operation sequence, as shown in the diagram, shall continue.
- Fail safe indication. When the emergency vehicle has control of the signals, Fail-Safe indication shall be flashing white light on the approach which is pre-empted. This indication shall not be given whether the failure results from a prior pre-emption on another approach, from equipment malfunction, or from any other cause.



PERMIT NO. TS-079-10 SHEET 2 OF 2

DATE ISSUED 4-16-91 DATE REVISED 4-30-99

GENERAL NOTES

INSTALL, OPERATE AND MAINTAIN THIS TRAFFIC SIGNAL IN ACCORDANCE WITH PENNSYLVANIA DEPARTMENT OF TRANSPORTATION REGULATIONS ON OFFICIAL TRAFFIC CONTROL DEVICES.

NO MODIFICATION OF THIS INSTALLATION IS PERMITTED UNLESS PRIOR APPROVAL IS GRANTED, IN WRITING, BY THE DEPARTMENT.

ALL MAINTENANCE NECESSARY FOR PROPER VISIBILITY OF THE SIGNALS, INCLUDING TRIMMING TREES, IS THE RESPONSIBILITY OF THE PERMITTEE.

THE PERMITTEE INSTALLS AND MAINTAINS ALL SIGNS AND PAVEMENT MARKINGS INDICATED ON THIS DRAWING WHICH ARE CONSIDERED PART OF THE PERMIT, UNLESS OTHERWISE INDICATED. THE DEPARTMENT MAINTAINS THE LONGITUDINAL PAVEMENT MARKINGS ON STATE HIGHWAYS.

INSTALL POST MOUNTED SIGNALS WITH THE SIGNAL HEADS A MINIMUM OF 2 FEET BEHIND THE FACE OF THE CURB OR EDGE OF THE SHOULDER. ALSO, INSTALL SUPPORT POLES FOR OVERHEAD SIGNALS WITH A MINIMUM HORIZONTAL CLEARANCE OF 2 FEET.

INSTALL SIGNAL HEADS AND SIGNS ERECTED OVER THE ROADWAY WITH THE BOTTOMS NOT LESS THAN 17 FEET NOR MORE THAN 19 FEET ABOVE THE ROADWAY.

INSTALL POST MOUNTED SIGNAL HEADS WITH BOTTOMS NOT LESS THAN 8 FEET NOR MORE THAN 15 FEET ABOVE THE SIDEWALK OR PAVEMENT GRADE.

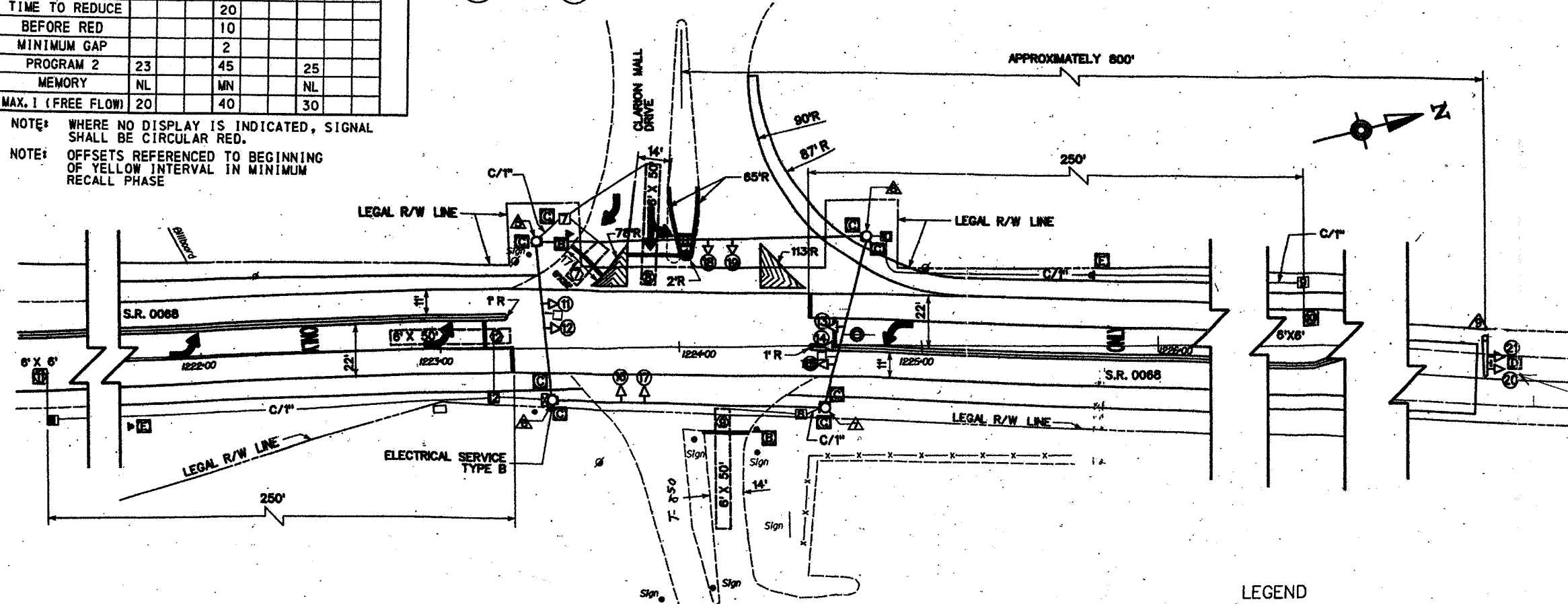
INSTALL SIGNAL HEADS WITH A MINIMUM HORIZONTAL DISTANCE OF 8 FEET BETWEEN THE HEADS AS MEASURED AT RIGHT ANGLES TO THE APPROACH.

IN ADDITION TO THIS SIGNAL PERMIT, THE PERMITTEE MUST OBTAIN A HIGHWAY OCCUPANCY PERMIT PRIOR TO ANY OPENINGS BEING MADE IN OR UNDER ANY PORTION OF A STATE HIGHWAY.

THIS DRAWING CANNOT BE USED AS A CONSTRUCTION DRAWING UNLESS THE PERMITTEE COMPLIES WITH THE PROVISIONS OF ACT 187, PREVENTION OF DAMAGE TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION CONSULT WITH UTILITY COMPANIES TO RESOLVE ANY PROBLEMS WHICH MAY BE CREATED DUE TO THE LOCATION OF UTILITIES.

PROVIDE THE DEPARTMENT WITH THE MANUFACTURER'S NAME, MODEL NO. AND APPROVAL NO. FOR ALL TRAFFIC SIGNAL EQUIPMENT WHICH REQUIRES A DEPARTMENT CERTIFICATE OF APPROVAL.

ARRANGE FOR A DEPARTMENT REPRESENTATIVE TO BE PRESENT WHEN LOCATIONS FOR SUPPORT POLES AND SENSORS ARE DETERMINED.



PHASING DIAGRAM

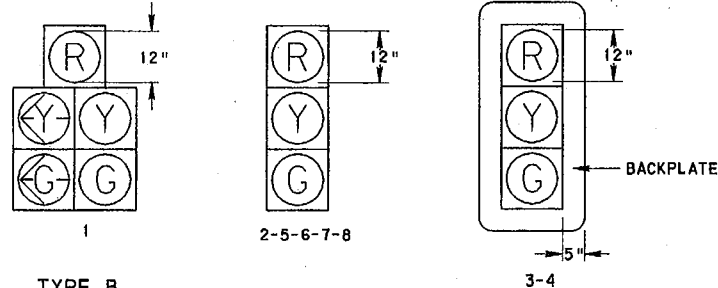
	PHASE 4+7				PHASE 4+8				PHASE 2+6				
													FLASHING
SIGNALS	1	2	3	4	1	2	3	4	1	2	3	4	
1													Y
2													Y
3-4													Y
5-6-7-8													Y
9-10-11-12													OFF
13-14-15-16													OFF
FIXED													
MINIMUM													
PASSAGE													
PEDESTRIAN													
MAX I													
MAX II													
MEMORY													

• UPON PEDESTRIAN ACTUATION ONLY

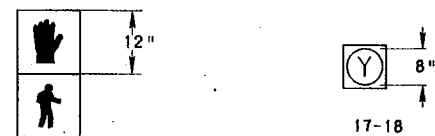
SIGNAL INDICATIONS

NOTE:

EQUIP SIGNAL HEADS 3 AND 4 WITH TUNNEL VISORS



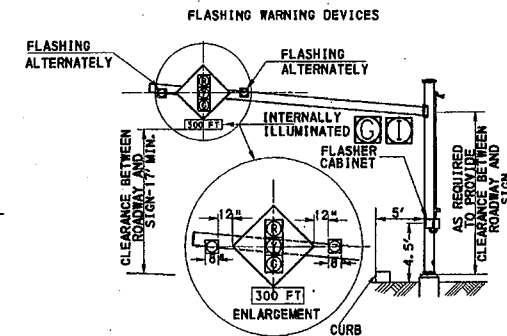
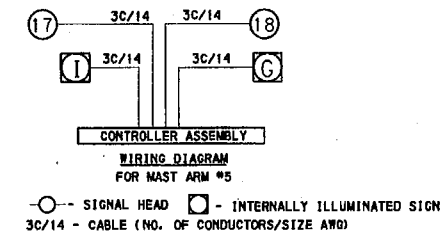
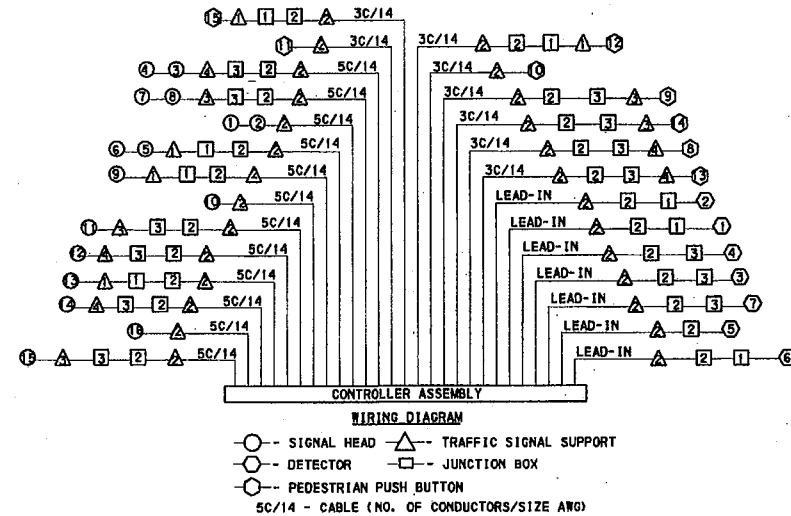
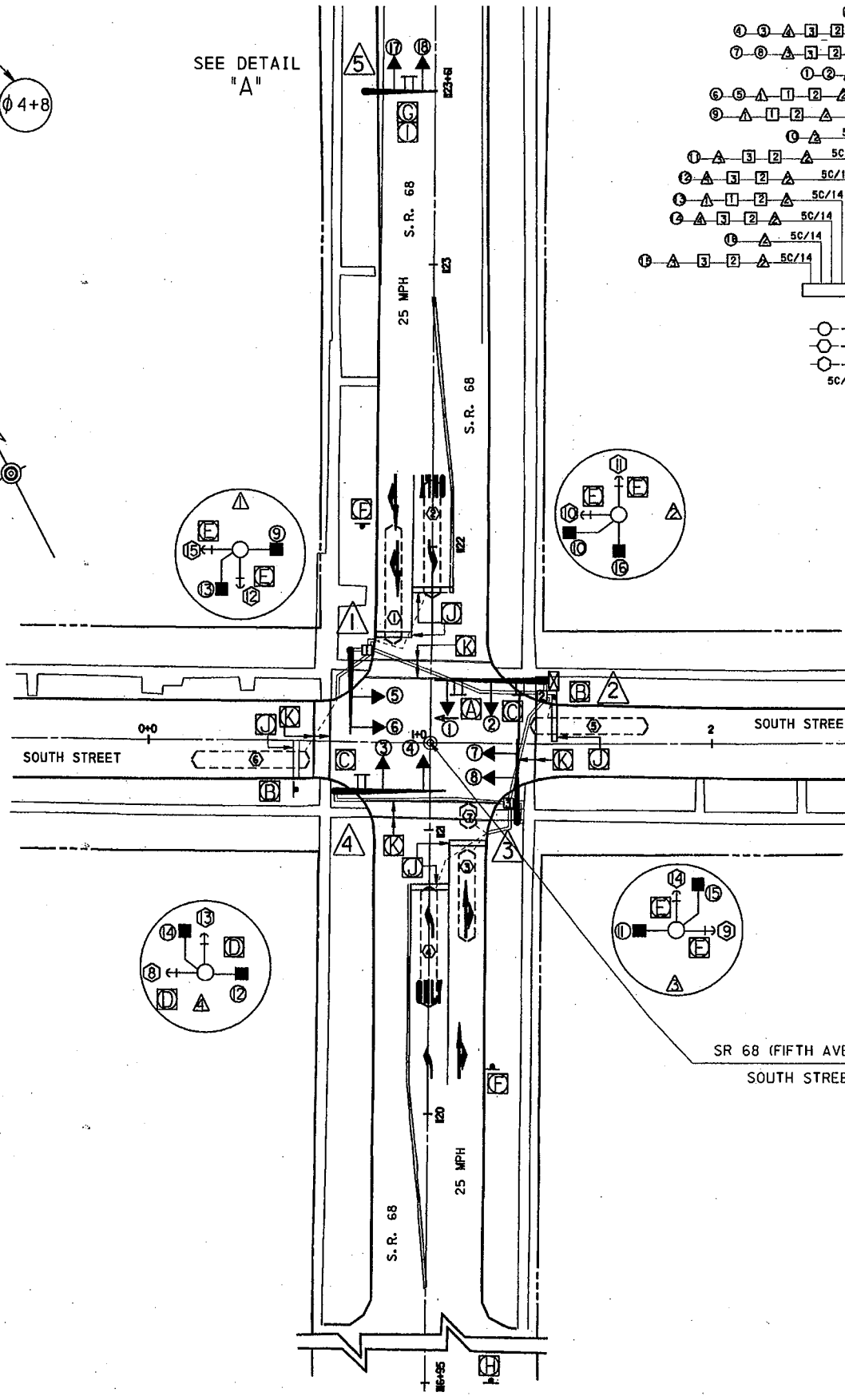
TYPE B MODIFIED



SIGNS & PAVEMENT MARKINGS

SIGN	STANDARD	DESCRIPTION	SIZE	QTY.	REMARKS
R10-12		LEFT TURN YIELD ON GREEN	30"x36"	1	
R10-6L		STOP HERE ON RED	24"x30"	2	
D3-4		SOUTH ST	66"x16"	2	
R10-4		PUSH BUTTON FOR WALK SIGNAL	9"x12"	2	
R10-4		PUSH BUTTON FOR WALK SIGNAL	9"x12"	6	
R3-7L		LEFT LANE MUST TURN LEFT	30"x30"	2	
W3-3		SIGNAL AHEAD (INTERNALLY ILLUMINATED)	36"x36"	1	
W3-3		SIGNAL AHEAD	36"x36"	1	
W3-3		300 FT (INTERNALLY ILLUMINATED)	11"x39"	1	
PVT. MKG.		STOP BARS	24"		
PVT. MKG.		CROSSWALKS	6"		

SEE DETAIL "A"



DETAIL "A"
NOT TO SCALE

LEGEND

- MAST ARM
- STRAIN POLE/MESSENGER CABLE
- PEDESTAL
- VEHICULAR SIGNAL HEAD
- PEDESTRIAN SIGNAL HEAD
- SIGN
- VEHICLE DETECTOR
- PEDESTRIAN PUSH BUTTON/SIGN
- CONTROLLER ASSEMBLY (CA)
- JUNCTION BOX
- CONDUIT

PERMIT NO. TS-198-10 SHEET 2 OF 2
DATE ISSUED 04/26/04 DATE REVISED

GENERAL NOTES

INSTALL, OPERATE AND MAINTAIN THIS TRAFFIC SIGNAL IN ACCORDANCE WITH ALL PENNDOT REGULATIONS, SPECIFICATIONS, AND STANDARD DRAWINGS AND IN ACCORDANCE WITH PUB. 408 AND PUB. 148.

NO MODIFICATION OF THIS INSTALLATION IS PERMITTED UNLESS PRIOR APPROVAL IS GRANTED, IN WRITING, BY PENNDOT.

ALL MAINTENANCE NECESSARY FOR PROPER VISIBILITY OF THE SIGNALS, INCLUDING TRIMMING TREES, IS THE RESPONSIBILITY OF THE PERMITTEE.

THE PERMITTEE INSTALLS AND MAINTAINS ALL SIGNS AND PAVEMENT MARKINGS INDICATED ON THIS DRAWING WHICH ARE CONSIDERED PART OF THE PERMIT, UNLESS OTHERWISE INDICATED. PENNDOT MAINTAINS THE LONGITUDINAL PAVEMENT MARKINGS ON STATE HIGHWAYS.

INSTALL POST MOUNTED SIGNALS WITH THE SIGNAL HEADS A MINIMUM OF 2 FEET BEHIND THE FACE OF THE CURB OR EDGE OF THE SHOULDER. ALSO, INSTALL SUPPORT POLES FOR OVERHEAD SIGNALS WITH A MINIMUM HORIZONTAL CLEARANCE OF 2 FEET.

INSTALL SIGNAL HEADS AND SIGNS ERECTED OVER THE ROADWAY WITH THE BOTTOMS NOT LESS THAN 17 FEET NOR MORE THAN 19 FEET ABOVE THE ROADWAY.

INSTALL POST MOUNTED SIGNAL HEADS WITH BOTTOMS NOT LESS THAN 8 FEET NOR MORE THAN 17 FEET ABOVE THE SIDEWALK OR PAVEMENT GRADE.

INSTALL SIGNAL HEADS WITH A MINIMUM HORIZONTAL DISTANCE OF 8 FEET BETWEEN THE HEADS AS MEASURED AT RIGHT ANGLES TO THE APPROACH.

IN ADDITION TO THIS SIGNAL PERMIT, THE PERMITTEE MUST OBTAIN A HIGHWAY OCCUPANCY PERMIT PRIOR TO ANY OPENINGS BEING MADE IN OR UNDER ANY PORTION OF A STATE HIGHWAY.

COUNTY : CLARION
MUNICIPALITY : CLARION BOROUGH
INTERSECTION : STATE ROUTE 68 (FIFTH STREET)
SOUTH STREET (BOROUGH STREET)

REVIEWED : *Carrie Papato Manager* 4/23/04
MUNICIPAL OFFICIAL DATE

RECOMMENDED :
DISTRICT TRAFFIC ENGINEER DATE

SCALE : 25 0 25 50

APPENDIX H

Existing Year 2015 HCM

Table – Existing Year 2015 Level of Service Summary

Intersection	AM LOS	Midday LOS	PM LOS
	(LOS / Seconds of Delay per Vehicle)		
Main Street (SR 0322) with 2nd Avenue	B (10.0)	A (5.8)	A (7.7)
Eastbound (Main Street)	A (4.7)	A (3.4)	A (4.8)
Westbound (Main Street)	A (6.2)	A (3.9)	A (4.9)
Northbound (2 nd Avenue)	C (21.1)	B (16.4)	C (20.1)
Southbound (2 nd Avenue)	C (20.4)	B (17.1)	C (22.0)
Main Street (SR 0322) with 5th Avenue (SR 0068)	C (23.7)	C (24.8)	C (30.4)
Eastbound (Main Street)	B (19.1)	C (25.3)	C (24.6)
Left Turn / Through	C (21.5)	C (27.7)	C (27.6)
Right Turn	B (13.8)	C (20.3)	B (17.7)
Westbound (Main Street)	B (19.5)	B (18.9)	C (25.6)
Left Turn	E (68.8)	E (57.0)	E (56.4)
Through / Right Turn	A (0.9)	A (1.7)	B (15.2)
Northbound (5 th Avenue)	C (31.3)	C (23.9)	C (31.0)
Left Turn	C (34.1)	C (25.7)	D (37.3)
Through / Right Turn	C (28.6)	C (23.0)	C (26.8)
Southbound (5 th Avenue)	D (40.0)	D (37.0)	D (50.0)
Left Turn	D (37.2)	C (28.3)	C (33.5)
Through / Right Turn	D (41.4)	D (38.6)	D (53.4)
Main Street (SR 0322) with 6th Avenue	A (5.5)	A (6.7)	B (18.2)
Eastbound (Main Street)	A (1.0)	A (1.1)	B (11.4)
Westbound (Main Street)	A (1.3)	A (2.0)	B (12.3)
Northbound (6 th Avenue)	D (39.7)	C (32.2)	D (37.8)
Southbound (6 th Avenue)	D (36.3)	C (34.4)	C (34.7)
Main Street (SR 0322) with 7th Avenue	A (0.6)	A (0.6)	A (0.7)
Eastbound (Main Street)	A (0.5)	A (0.7)	A (0.4)
Westbound (Main Street)	A (0.8)	A (0.5)	A (1.0)
Northbound (7 th Avenue)	A (0.0)	A (0.0)	B (12.2)
Main Street (SR 0322) with 8th Avenue	A (9.7)	A (9.4)	D (36.9)
Eastbound (Main Street)	A (1.8)	A (1.1)	B (11.9)
Left Turn / Through	A (2.2)	A (1.3)	B (12.7)
Right Turn	A (0.7)	A (0.5)	B (10.4)
Westbound (Main Street)	A (1.2)	A (1.3)	B (13.9)
Left Turn	A (0.9)	A (0.5)	B (16.2)
Through / Right Turn	A (1.3)	A (1.5)	B (13.3)
Northbound (8 th Avenue)	C (29.6)	C (27.9)	E (65.2)
Left Turn / Through	C (32.5)	C (30.0)	F (88.0)
Right Turn	C (24.4)	C (23.4)	B (14.6)
Southbound (8 th Avenue)	C (29.4)	C (29.4)	F (97.1)
Main Street (SR 0322) with 9th Avenue	A (4.7)	A (5.1)	A (7.2)
Eastbound (Main Street)	A (1.1)	A (1.0)	A (0.8)
Left Turn	A (1.0)	A (1.1)	A (0.9)
Through / Right Turn	A (1.1)	A (1.0)	A (0.8)
Westbound (Main Street)	A (6.5)	A (7.4)	A (5.0)
Northbound (9 th Avenue)	C (34.7)	C (32.5)	D (44.9)
Left Turn / Through	C (34.7)	C (32.3)	D (45.2)
Right Turn	C (34.5)	C (32.9)	D (44.3)

Intersection	AM LOS	Midday LOS	PM LOS
	(LOS / Seconds of Delay per Vehicle)		
5th Avenue (SR 0068) with South Street		B (11.0)	B (14.7)
<i>Eastbound (South Street)</i>		B (12.0)	B (14.9)
<i>Westbound (South Street)</i>		B (14.1)	B (18.0)
<i>Northbound (5th Avenue)</i>		A (7.4)	B (12.0)
<i>Left Turn</i>		A (8.9)	B (11.3)
<i>Through / Right Turn</i>		A (7.2)	B (12.0)
<i>Southbound (5th Avenue)</i>		B (13.0)	B (16.2)
<i>Left Turn</i>		A (10.0)	B (16.1)
<i>Through / Right Turn</i>		B (13.1)	B (16.2)
5th Avenue (SR 0068) with Clarion Mall Drive / Kane Drive		B (12.0)	B (12.4)
<i>Eastbound (Clarion Mall Drive)</i>		D (49.3) D (49.3)	D (49.3)
<i>Left Turn / Through</i>		D (49.3)	D (49.3)
<i>Right Turn</i>		A (0.0)	A (0.0)
<i>Westbound (Kane Drive)</i>		D (46.6)	D (45.0)
<i>Northbound (5th Avenue)</i>		A (3.2)	A (1.1)
<i>Left Turn</i>		A (3.7)	A (4.9)
<i>Through / Right Turn</i>		A (3.1)	A (0.6)
<i>Southbound (5th Avenue)</i>		A (6.2)	A (8.5)
<i>Left Turn</i>		A (5.2)	A (5.8)
<i>Through / Right Turn</i>		A (6.4)	A (8.6)
5th Avenue (SR 0068) with Perkins Drive / Commercial Drive		D (48.6)	D (39.1)
<i>Eastbound (Perkins Drive)</i>		D (40.3)	C (32.6)
<i>Left Turn / Through</i>		E (57.8)	D (39.3)
<i>Right Turn</i>		C (22.6)	C (26.8)
<i>Westbound (Commercial Drive)</i>		F (217.8)	F (106.2)
<i>Northbound (5th Avenue)</i>		D (36.6)	C (29.2)
<i>Left Turn</i>		E (60.2)	E (55.8)
<i>Through / Right Turn</i>		B (14.0)	B (15.5)
<i>Southbound (5th Avenue)</i>		C (26.9)	D (37.2)
<i>Left Turn</i>		E (70.3)	E (69.8)
<i>Through</i>		C (21.5)	D (35.6)
<i>Right Turn</i>		C (21.1)	C (33.2)

HCM 2010 Signalized Intersection Summary
1: Second Avenue & Main Street (SR 322)

Existing Year 2015 AM Peak Hour

11/10/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	18	214	11	8	432	43	66	43	2	21	31	34
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		0.99	0.99		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1956	1731	1956	2016	1912	2016	1966	1861	1966	1966	1880	1966
Adj Flow Rate, veh/h	24	255	16	16	514	60	116	75	4	36	72	52
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.75	0.84	0.69	0.50	0.84	0.72	0.57	0.57	0.50	0.58	0.43	0.65
Percent Heavy Veh, %	14	14	14	6	6	6	7	7	7	3	3	3
Cap, veh/h	113	943	56	81	1051	120	261	127	6	128	163	100
Arrive On Green	0.63	0.63	0.63	0.63	0.63	0.63	0.18	0.18	0.18	0.18	0.18	0.18
Sat Flow, veh/h	62	1488	89	18	1659	190	860	714	33	251	918	563
Grp Volume(v), veh/h	295	0	0	590	0	0	195	0	0	160	0	0
Grp Sat Flow(s),veh/h/ln	1639	0	0	1866	0	0	1607	0	0	1731	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	4.0	0.0	0.0	8.9	0.0	0.0	5.6	0.0	0.0	4.3	0.0	0.0
Prop In Lane	0.08		0.05	0.03		0.10	0.59		0.02	0.22		0.32
Lane Grp Cap(c), veh/h	1112	0	0	1252	0	0	394	0	0	390	0	0
V/C Ratio(X)	0.27	0.00	0.00	0.47	0.00	0.00	0.50	0.00	0.00	0.41	0.00	0.00
Avail Cap(c_a), veh/h	1597	0	0	1825	0	0	682	0	0	716	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	4.3	0.0	0.0	5.2	0.0	0.0	20.1	0.0	0.0	19.7	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	2.0	0.0	0.0	4.8	0.0	0.0	2.7	0.0	0.0	2.2	0.0	0.0
LnGrp Delay(d),s/veh	4.7	0.0	0.0	6.2	0.0	0.0	21.1	0.0	0.0	20.4	0.0	0.0
LnGrp LOS	A			A			C			C		
Approach Vol, veh/h		295			590			195			160	
Approach Delay, s/veh		4.7			6.2			21.1			20.4	
Approach LOS		A			A			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		38.6		14.4		38.6		14.4				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		50.0		20.0		50.0		20.0				
Max Q Clear Time (g_c+l1), s		6.0		6.3		10.9		7.6				
Green Ext Time (p_c), s		24.3		1.3		22.7		1.2				
Intersection Summary												
HCM 2010 Ctrl Delay	10.0											
HCM 2010 LOS	B											

HCM 2010 Signalized Intersection Summary

Existing Year 2015 AM Peak Hour

2: 5th Ave (SR 68)/5th Ave (SR 1005) & Main Street (SR 322)

11/10/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	400	180	100	250	15	105	50	65	55	95	15
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	0.99		0.99	0.98		0.98
Parking Bus, Adj	1.00	1.00	0.89	1.00	1.00	0.89	1.00	1.00	0.89	1.00	1.00	0.89
Adj Sat Flow, veh/h/ln	1693	1660	1660	1590	1654	1770	1676	1733	1743	1693	1761	1761
Adj Flow Rate, veh/h	12	476	214	111	278	17	114	54	71	63	109	17
Adj No. of Lanes	0	1	1	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.84	0.84	0.84	0.90	0.90	0.90	0.92	0.92	0.92	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	7	7	7	0	0	0	0	0	0
Cap, veh/h	48	761	651	132	850	52	221	149	196	221	165	26
Arrive On Green	0.47	0.47	0.47	0.17	1.00	1.00	0.06	0.25	0.25	0.13	0.13	0.13
Sat Flow, veh/h	14	1635	1249	1514	1373	84	1596	602	791	1127	1320	206
Grp Volume(v), veh/h	488	0	214	111	0	295	114	0	125	63	0	126
Grp Sat Flow(s),veh/h/ln	1649	0	1249	1514	0	1457	1596	0	1393	1127	0	1526
Q Serve(g_s), s	0.0	0.0	8.9	6.4	0.0	0.0	5.0	0.0	6.7	4.7	0.0	7.1
Cycle Q Clear(g_c), s	20.0	0.0	8.9	6.4	0.0	0.0	5.0	0.0	6.7	4.7	0.0	7.1
Prop In Lane	0.02		1.00	1.00		0.06	1.00		0.57	1.00		0.13
Lane Grp Cap(c), veh/h	808	0	651	132	0	902	221	0	345	221	0	191
V/C Ratio(X)	0.60	0.00	0.33	0.84	0.00	0.33	0.52	0.00	0.36	0.29	0.00	0.66
Avail Cap(c_a), veh/h	808	0	651	135	0	902	221	0	480	330	0	339
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.97	0.00	0.97	0.91	0.00	0.91	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.2	0.0	12.5	36.5	0.0	0.0	32.1	0.0	28.0	36.5	0.0	37.5
Incr Delay (d2), s/veh	3.2	0.0	1.3	32.3	0.0	0.9	2.1	0.0	0.6	0.7	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(-26165%),veh/ln	9.8	0.0	3.3	3.8	0.0	0.2	0.7	0.0	2.6	1.5	0.0	3.2
LnGrp Delay(d),s/veh	21.5	0.0	13.8	68.8	0.0	0.9	34.1	0.0	28.6	37.2	0.0	41.4
LnGrp LOS	C		B	E		A	C		C	D		D
Approach Vol, veh/h		702			406			239			189	
Approach Delay, s/veh		19.1			19.5			31.3			40.0	
Approach LOS		B			B			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4		6		8				
Phs Duration (G+Y+Rc), s	13.9	47.9	11.0	17.3		61.7		28.3				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0		6.0		6.0				
Max Green Setting (Gmax), s	8.0	33.0	5.0	20.0		47.0		31.0				
Max Q Clear Time (g_c+I1), s	8.4	22.0	7.0	9.1		2.0		8.7				
Green Ext Time (p_c), s	0.0	3.4	0.0	1.0		4.8		1.3				
Intersection Summary												
HCM 2010 Ctrl Delay			23.7									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
3: 6th Ave & Main Street (SR 322)

Existing Year 2015 AM Peak Hour

11/10/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	475	35	20	330	10	25	10	20	15	10	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	0.99		0.99	0.96		0.96	0.98		0.96
Parking Bus, Adj	1.00	1.00	0.89	1.00	1.00	0.89	1.00	1.00	0.89	1.00	1.00	0.89
Adj Sat Flow, veh/h/ln	1770	1718	1770	1770	1654	1770	1701	1701	1701	1701	1701	1701
Adj Flow Rate, veh/h	13	609	45	25	407	12	48	19	38	18	12	12
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.78	0.78	0.78	0.81	0.81	0.81	0.52	0.52	0.52	0.85	0.85	0.85
Percent Heavy Veh, %	3	3	3	7	7	7	0	0	0	0	0	0
Cap, veh/h	48	973	71	72	929	27	112	43	54	109	63	46
Arrive On Green	1.00	1.00	1.00	1.00	1.00	1.00	0.12	0.12	0.12	0.12	0.12	0.12
Sat Flow, veh/h	11	1387	101	42	1325	38	443	352	451	431	524	382
Grp Volume(v), veh/h	667	0	0	444	0	0	105	0	0	42	0	0
Grp Sat Flow(s),veh/h/ln	1499	0	0	1405	0	0	1246	0	0	1337	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	4.7	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	7.1	0.0	0.0	2.4	0.0	0.0
Prop In Lane	0.02		0.07	0.06		0.03	0.46		0.36	0.43		0.29
Lane Grp Cap(c), veh/h	1092	0	0	1028	0	0	209	0	0	219	0	0
V/C Ratio(X)	0.61	0.00	0.00	0.43	0.00	0.00	0.50	0.00	0.00	0.19	0.00	0.00
Avail Cap(c_a), veh/h	1092	0	0	1028	0	0	290	0	0	301	0	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.38	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	37.8	0.0	0.0	35.8	0.0	0.0
Incr Delay (d2), s/veh	1.0	0.0	0.0	1.3	0.0	0.0	1.9	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.3	0.0	0.0	0.4	0.0	0.0	2.6	0.0	0.0	1.0	0.0	0.0
LnGrp Delay(d),s/veh	1.0	0.0	0.0	1.3	0.0	0.0	39.7	0.0	0.0	36.3	0.0	0.0
LnGrp LOS	A			A			D			D		
Approach Vol, veh/h		667			444			105			42	
Approach Delay, s/veh		1.0			1.3			39.7			36.3	
Approach LOS		A			A			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		71.1		18.9		71.1		18.9				
Change Period (Y+Rc), s		8.0		8.0		8.0		8.0				
Max Green Setting (Gmax), s		57.0		17.0		57.0		17.0				
Max Q Clear Time (g_c+l1), s		2.0		4.4		2.0		9.1				
Green Ext Time (p_c), s		6.5		0.4		6.5		0.3				
Intersection Summary												
HCM 2010 Ctrl Delay			5.5									
HCM 2010 LOS			A									

HCM 2010 Signalized Intersection Summary
5: 8th Ave (SR 1007)/8th Ave & Main Street (SR 322)

Existing Year 2015 AM Peak Hour

11/10/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	330	110	65	260	10	165	30	110	25	25	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.96	0.98		0.98	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1727	1677	1677	1582	1582	1693	1719	1719	1719	1761	1761	1761
Adj Flow Rate, veh/h	14	465	155	75	299	11	179	33	120	35	35	14
Adj No. of Lanes	0	1	1	1	1	0	0	1	1	0	1	0
Peak Hour Factor	0.71	0.71	0.71	0.87	0.87	0.87	0.92	0.92	0.92	0.72	0.72	0.72
Percent Heavy Veh, %	3	3	3	7	7	7	0	0	0	0	0	0
Cap, veh/h	51	859	714	429	791	29	291	41	429	87	74	21
Arrive On Green	1.00	1.00	1.00	1.00	1.00	1.00	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	18	1644	1367	668	1515	56	725	136	1432	101	248	70
Grp Volume(v), veh/h	479	0	155	75	0	310	212	0	120	84	0	0
Grp Sat Flow(s),veh/h/ln	1663	0	1367	668	0	1571	861	0	1432	418	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.8	1.8	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	22.4	0.0	5.8	24.2	0.0	0.0
Prop In Lane	0.03		1.00	1.00		0.04	0.84		1.00	0.42		0.17
Lane Grp Cap(c), veh/h	910	0	714	429	0	820	332	0	429	182	0	0
V/C Ratio(X)	0.53	0.00	0.22	0.17	0.00	0.38	0.64	0.00	0.28	0.46	0.00	0.00
Avail Cap(c_a), veh/h	910	0	714	429	0	820	390	0	493	245	0	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.97	0.00	0.97	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	29.9	0.0	24.1	27.6	0.0	0.0
Incr Delay (d2), s/veh	2.2	0.0	0.7	0.9	0.0	1.3	2.7	0.0	0.4	1.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	0.6	0.0	0.1	0.1	0.0	0.3	5.3	0.0	2.3	2.1	0.0	0.0
LnGrp Delay(d),s/veh	2.2	0.0	0.7	0.9	0.0	1.3	32.5	0.0	24.4	29.4	0.0	0.0
LnGrp LOS	A		A	A		A	C		C	C		
Approach Vol, veh/h		634			385			332			84	
Approach Delay, s/veh		1.8			1.2			29.6			29.4	
Approach LOS		A			A			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		55.0		35.0		55.0		35.0				
Change Period (Y+Rc), s		8.0		8.0		8.0		8.0				
Max Green Setting (Gmax), s		43.0		31.0		43.0		31.0				
Max Q Clear Time (g_c+I1), s		2.0		26.2		2.0		24.4				
Green Ext Time (p_c), s		5.8		0.8		5.8		1.0				
Intersection Summary												
HCM 2010 Ctrl Delay			9.7									
HCM 2010 LOS			A									

HCM 2010 Signalized Intersection Summary
6: 9th Ave & Main Street (SR 322)

Existing Year 2015 AM Peak Hour

11/10/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	55	390	20	0	325	25	10	15	10	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.69			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1610	1677	1727	0	1582	1693	1805	1805	1805			
Adj Flow Rate, veh/h	68	481	25	0	339	26	13	20	13			
Adj No. of Lanes	1	1	0	0	1	0	0	1	1			
Peak Hour Factor	0.81	0.81	0.81	0.96	0.96	0.96	0.75	0.75	0.75			
Percent Heavy Veh, %	3	3	3	0	7	7	0	0	0			
Cap, veh/h	599	1089	57	0	999	77	93	143	141			
Arrive On Green	1.00	1.00	1.00	0.00	0.69	0.69	0.13	0.13	0.13			
Sat Flow, veh/h	874	1580	82	0	1450	111	697	1073	1062			
Grp Volume(v), veh/h	68	0	506	0	0	365	33	0	13			
Grp Sat Flow(s),veh/h/ln	874	0	1662	0	0	1562	1770	0	1062			
Q Serve(g_s), s	1.1	0.0	0.0	0.0	0.0	8.5	1.5	0.0	1.0			
Cycle Q Clear(g_c), s	9.6	0.0	0.0	0.0	0.0	8.5	1.5	0.0	1.0			
Prop In Lane	1.00		0.05	0.00		0.07	0.39		1.00			
Lane Grp Cap(c), veh/h	599	0	1145	0	0	1076	236	0	141			
V/C Ratio(X)	0.11	0.00	0.44	0.00	0.00	0.34	0.14	0.00	0.09			
Avail Cap(c_a), veh/h	599	0	1145	0	0	1076	374	0	224			
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.87	0.00	0.87	0.00	0.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.7	0.0	0.0	0.0	0.0	5.7	34.5	0.0	34.2			
Incr Delay (d2), s/veh	0.3	0.0	1.1	0.0	0.0	0.9	0.3	0.0	0.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(-26165%),veh/ln	0.3	0.0	0.3	0.0	0.0	3.9	0.7	0.0	0.3			
LnGrp Delay(d),s/veh	1.0	0.0	1.1	0.0	0.0	6.5	34.7	0.0	34.5			
LnGrp LOS	A		A			A	C		C			
Approach Vol, veh/h		574			365			46				
Approach Delay, s/veh		1.1			6.5			34.7				
Approach LOS		A			A			C				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		70.0				70.0		20.0				
Change Period (Y+Rc), s		8.0				8.0		8.0				
Max Green Setting (Gmax), s		55.0				55.0		19.0				
Max Q Clear Time (g_c+I1), s		11.6				10.5		3.5				
Green Ext Time (p_c), s		5.0				5.0		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay			4.7									
HCM 2010 LOS			A									

Intersection												
Int Delay, s/veh	0.6											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	30	450	30	38	360	37	0	0	0	0	0	0
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, %	-	1	-	-	1	-	-	1	-	-	1	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	7	7	7	0	0	0	0	0	0
Mvmt Flow	33	500	33	42	400	41	0	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	441	0	0	533	0	0	1088	1109	517
Stage 1	-	-	-	-	-	-	583	583	-
Stage 2	-	-	-	-	-	-	505	526	-
Critical Hdwy	4.13	-	-	4.17	-	-	6.6	6.7	6.3
Critical Hdwy Stg 1	-	-	-	-	-	-	5.6	5.7	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.6	5.7	-
Follow-up Hdwy	2.227	-	-	2.263	-	-	3.5	4	3.3
Pot Cap-1 Maneuver	1114	-	-	1010	-	-	227	199	554
Stage 1	-	-	-	-	-	-	544	486	-
Stage 2	-	-	-	-	-	-	593	517	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1114	-	-	1010	-	-	206	0	554
Mov Cap-2 Maneuver	-	-	-	-	-	-	206	0	-
Stage 1	-	-	-	-	-	-	521	0	-
Stage 2	-	-	-	-	-	-	560	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0.5	0.8	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR
Capacity (veh/h)	-	1114	-	-	1010	-	-
HCM Lane V/C Ratio	-	0.03	-	-	0.042	-	-
HCM Control Delay (s)	0	8.3	0	-	8.7	0	-
HCM Lane LOS	A	A	A	-	A	A	-
HCM 95th %tile Q(veh)	-	0.1	-	-	0.1	-	-

HCM 2010 Signalized Intersection Summary
1: Second Avenue & Main Street (SR 322)

Existing Year 2015 Midday Peak Hour

11/10/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	33	226	7	2	357	27	16	18	3	25	4	32
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		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
Adj Sat Flow, veh/h/ln	1956	1836	1956	2016	1885	2016	1966	1966	1966	1966	1966	1966
Adj Flow Rate, veh/h	40	240	12	4	392	36	24	20	8	36	8	44
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.83	0.94	0.58	0.50	0.91	0.75	0.67	0.90	0.38	0.69	0.50	0.73
Percent Heavy Veh, %	8	8	8	7	7	7	0	0	0	0	0	0
Cap, veh/h	186	963	45	95	1087	99	201	89	28	190	26	86
Arrive On Green	0.64	0.64	0.64	0.64	0.64	0.64	0.10	0.10	0.10	0.10	0.10	0.10
Sat Flow, veh/h	128	1505	70	3	1697	155	635	856	271	579	247	827
Grp Volume(v), veh/h	292	0	0	432	0	0	52	0	0	88	0	0
Grp Sat Flow(s),veh/h/ln	1702	0	0	1855	0	0	1761	0	0	1653	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0
Cycle Q Clear(g_c), s	2.7	0.0	0.0	4.3	0.0	0.0	1.0	0.0	0.0	1.9	0.0	0.0
Prop In Lane	0.14		0.04	0.01		0.08	0.46		0.15	0.41		0.50
Lane Grp Cap(c), veh/h	1194	0	0	1281	0	0	318	0	0	302	0	0
V/C Ratio(X)	0.24	0.00	0.00	0.34	0.00	0.00	0.16	0.00	0.00	0.29	0.00	0.00
Avail Cap(c_a), veh/h	2221	0	0	2455	0	0	980	0	0	948	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	3.0	0.0	0.0	3.3	0.0	0.0	16.2	0.0	0.0	16.5	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.0	0.0	0.6	0.0	0.0	0.2	0.0	0.0	0.5	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	1.4	0.0	0.0	2.4	0.0	0.0	0.5	0.0	0.0	0.9	0.0	0.0
LnGrp Delay(d),s/veh	3.4	0.0	0.0	3.9	0.0	0.0	16.4	0.0	0.0	17.1	0.0	0.0
LnGrp LOS	A			A			B			B		
Approach Vol, veh/h		292			432			52			88	
Approach Delay, s/veh		3.4			3.9			16.4			17.1	
Approach LOS		A			A			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		30.1		9.1		30.1		9.1				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		50.0		20.0		50.0		20.0				
Max Q Clear Time (g_c+I1), s		4.7		3.9		6.3		3.0				
Green Ext Time (p_c), s		19.1		0.4		18.8		0.4				
Intersection Summary												
HCM 2010 Ctrl Delay			5.8									
HCM 2010 LOS			A									

HCM 2010 Signalized Intersection Summary

Existing Year 2015 Midday Peak Hour

2: 5th Ave (SR 68)/5th Ave (SR 1005) & Main Street (SR 322)

11/10/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	294	150	152	314	23	105	70	133	37	180	25
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.96	1.00		0.98	0.97		0.96	0.95		0.94
Parking Bus, Adj	1.00	1.00	0.89	1.00	1.00	0.89	1.00	1.00	0.89	1.00	1.00	0.89
Adj Sat Flow, veh/h/ln	1693	1676	1676	1685	1752	1770	1676	1743	1743	1693	1761	1761
Adj Flow Rate, veh/h	11	320	163	175	361	26	108	72	137	42	202	28
Adj No. of Lanes	0	1	1	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.87	0.87	0.87	0.97	0.97	0.97	0.89	0.89	0.89
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	0	0	0
Cap, veh/h	50	538	475	202	753	54	241	156	296	292	273	38
Arrive On Green	0.33	0.33	0.33	0.25	1.00	1.00	0.06	0.33	0.33	0.20	0.20	0.20
Sat Flow, veh/h	19	1639	1220	1604	1435	103	1596	466	887	1013	1335	185
Grp Volume(v), veh/h	331	0	163	175	0	387	108	0	209	42	0	230
Grp Sat Flow(s),veh/h/ln	1658	0	1220	1604	0	1538	1596	0	1354	1013	0	1520
Q Serve(g_s), s	0.0	0.0	8.0	8.9	0.0	0.0	4.4	0.0	10.3	2.9	0.0	12.1
Cycle Q Clear(g_c), s	14.0	0.0	8.0	8.9	0.0	0.0	4.4	0.0	10.3	2.9	0.0	12.1
Prop In Lane	0.03		1.00	1.00		0.07	1.00		0.66	1.00		0.12
Lane Grp Cap(c), veh/h	589	0	475	202	0	808	241	0	452	292	0	311
V/C Ratio(X)	0.56	0.00	0.34	0.87	0.00	0.48	0.45	0.00	0.46	0.14	0.00	0.74
Avail Cap(c_a), veh/h	589	0	475	208	0	808	241	0	494	323	0	358
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.98	0.00	0.98	0.85	0.00	0.85	0.90	0.00	0.90	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.9	0.0	18.4	31.1	0.0	0.0	24.5	0.0	22.3	28.1	0.0	31.7
Incr Delay (d2), s/veh	3.8	0.0	1.9	25.9	0.0	1.7	1.2	0.0	0.7	0.2	0.0	6.9
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	7.1	0.0	2.9	5.3	0.0	0.4	2.0	0.0	3.9	0.8	0.0	5.6
LnGrp Delay(d),s/veh	27.7	0.0	20.3	57.0	0.0	1.7	25.7	0.0	23.0	28.3	0.0	38.6
LnGrp LOS	C		C	E		A	C		C	C		D
Approach Vol, veh/h		494			562			317			272	
Approach Delay, s/veh		25.3			18.9			23.9			37.0	
Approach LOS		C			B			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4		6		8				
Phs Duration (G+Y+Rc), s	16.7	33.9	11.0	23.4		50.6		34.4				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0		6.0		6.0				
Max Green Setting (Gmax), s	11.0	25.0	5.0	20.0		42.0		31.0				
Max Q Clear Time (g_c+I1), s	10.9	16.0	6.4	14.1		2.0		12.3				
Green Ext Time (p_c), s	0.0	2.7	0.0	1.1		4.1		2.1				
Intersection Summary												
HCM 2010 Ctrl Delay			24.8									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
3: 6th Ave & Main Street (SR 322)

Existing Year 2015 Midday Peak Hour

11/10/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	21	415	28	15	428	24	22	11	35	38	14	39
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.97		0.92	0.96		0.93	0.91		0.88	0.91		0.87
Parking Bus, Adj	1.00	1.00	0.89	1.00	1.00	0.89	1.00	1.00	0.89	1.00	1.00	0.89
Adj Sat Flow, veh/h/ln	1770	1752	1770	1770	1752	1770	1701	1701	1701	1701	1701	1701
Adj Flow Rate, veh/h	23	451	30	17	492	28	29	14	45	50	18	51
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.87	0.87	0.87	0.77	0.77	0.77	0.76	0.76	0.76
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	0	0	0
Cap, veh/h	65	884	57	56	911	51	106	53	108	127	48	87
Arrive On Green	1.00	1.00	1.00	1.00	1.00	1.00	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	32	1376	89	20	1417	79	296	312	636	398	284	511
Grp Volume(v), veh/h	504	0	0	537	0	0	88	0	0	119	0	0
Grp Sat Flow(s),veh/h/ln	1497	0	0	1516	0	0	1244	0	0	1193	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0	7.2	0.0	0.0
Prop In Lane	0.05		0.06	0.03		0.05	0.33		0.51	0.42		0.43
Lane Grp Cap(c), veh/h	1006	0	0	1018	0	0	267	0	0	262	0	0
V/C Ratio(X)	0.50	0.00	0.00	0.53	0.00	0.00	0.33	0.00	0.00	0.45	0.00	0.00
Avail Cap(c_a), veh/h	1006	0	0	1018	0	0	354	0	0	348	0	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.59	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	31.5	0.0	0.0	32.2	0.0	0.0
Incr Delay (d2), s/veh	1.1	0.0	0.0	2.0	0.0	0.0	0.7	0.0	0.0	1.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.0	0.6	0.0	0.0	1.9	0.0	0.0	2.6	0.0	0.0
LnGrp Delay(d),s/veh	1.1	0.0	0.0	2.0	0.0	0.0	32.2	0.0	0.0	33.4	0.0	0.0
LnGrp LOS	A			A			C			C		
Approach Vol, veh/h		504			537			88			119	
Approach Delay, s/veh		1.1			2.0			32.2			33.4	
Approach LOS		A			A			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		62.6		22.4		62.6		22.4				
Change Period (Y+Rc), s		8.0		8.0		8.0		8.0				
Max Green Setting (Gmax), s		48.0		21.0		48.0		21.0				
Max Q Clear Time (g_c+l1), s		2.0		9.2		2.0		7.0				
Green Ext Time (p_c), s		5.7		0.7		5.7		0.7				
Intersection Summary												
HCM 2010 Ctrl Delay			6.7									
HCM 2010 LOS			A									

HCM 2010 Signalized Intersection Summary
5: 8th Ave (SR 1007)/8th Ave & Main Street (SR 322)

Existing Year 2015 Midday Peak Hour

11/10/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	5	307	99	63	343	5	176	28	96	30	20	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.99	0.99		0.99	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1727	1710	1710	1693	1693	1693	1719	1702	1702	1761	1761	1761
Adj Flow Rate, veh/h	6	370	119	69	377	5	196	31	107	38	25	13
Adj No. of Lanes	0	1	1	1	1	0	0	1	1	0	1	0
Peak Hour Factor	0.83	0.83	0.83	0.91	0.91	0.91	0.90	0.90	0.90	0.79	0.79	0.79
Percent Heavy Veh, %	1	1	1	0	0	0	1	1	1	0	0	0
Cap, veh/h	46	883	747	509	866	11	325	39	416	106	61	21
Arrive On Green	1.00	1.00	1.00	1.00	1.00	1.00	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	6	1698	1437	816	1667	22	841	133	1426	146	210	74
Grp Volume(v), veh/h	376	0	119	69	0	382	227	0	107	76	0	0
Grp Sat Flow(s),veh/h/ln	1704	0	1437	816	0	1689	974	0	1426	430	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.9	2.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	19.5	0.0	4.9	21.6	0.0	0.0
Prop In Lane	0.02		1.00	1.00		0.01	0.86		1.00	0.50		0.17
Lane Grp Cap(c), veh/h	929	0	747	509	0	878	363	0	416	189	0	0
V/C Ratio(X)	0.40	0.00	0.16	0.14	0.00	0.44	0.62	0.00	0.26	0.40	0.00	0.00
Avail Cap(c_a), veh/h	929	0	747	509	0	878	488	0	554	321	0	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.94	0.00	0.94	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	28.2	0.0	23.0	28.0	0.0	0.0
Incr Delay (d2), s/veh	1.3	0.0	0.5	0.5	0.0	1.5	1.8	0.0	0.3	1.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.1	0.1	0.0	0.4	5.2	0.0	2.0	1.8	0.0	0.0
LnGrp Delay(d),s/veh	1.3	0.0	0.5	0.5	0.0	1.5	30.0	0.0	23.4	29.4	0.0	0.0
LnGrp LOS	A		A	A		A	C		C	C		
Approach Vol, veh/h		495			451			334			76	
Approach Delay, s/veh		1.1			1.3			27.9			29.4	
Approach LOS		A			A			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		52.2		32.8		52.2		32.8				
Change Period (Y+Rc), s		8.0		8.0		8.0		8.0				
Max Green Setting (Gmax), s		36.0		33.0		36.0		33.0				
Max Q Clear Time (g_c+l1), s		2.0		23.6		2.0		21.5				
Green Ext Time (p_c), s		4.9		1.2		4.9		1.4				
Intersection Summary												
HCM 2010 Ctrl Delay			9.4									
HCM 2010 LOS			A									

HCM 2010 Signalized Intersection Summary
6: 9th Ave & Main Street (SR 322)

Existing Year 2015 Midday Peak Hour

11/10/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	13	405	15	0	406	33	5	10	11	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	0.99		0.97	1.00		0.91	1.00		0.52			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1642	1710	1727	0	1676	1693	1805	1805	1805			
Adj Flow Rate, veh/h	15	455	17	0	427	35	7	14	15			
Adj No. of Lanes	1	1	0	0	1	0	0	1	1			
Peak Hour Factor	0.89	0.89	0.89	0.95	0.95	0.95	0.72	0.72	0.72			
Percent Heavy Veh, %	1	1	1	0	1	1	0	0	0			
Cap, veh/h	527	1106	41	0	1025	84	80	161	109			
Arrive On Green	1.00	1.00	1.00	0.00	0.68	0.68	0.14	0.14	0.14			
Sat Flow, veh/h	805	1636	61	0	1516	124	592	1184	801			
Grp Volume(v), veh/h	15	0	472	0	0	462	21	0	15			
Grp Sat Flow(s),veh/h/ln	805	0	1697	0	0	1641	1775	0	801			
Q Serve(g_s), s	0.3	0.0	0.0	0.0	0.0	10.8	0.9	0.0	1.4			
Cycle Q Clear(g_c), s	11.1	0.0	0.0	0.0	0.0	10.8	0.9	0.0	1.4			
Prop In Lane	1.00		0.04	0.00		0.08	0.33		1.00			
Lane Grp Cap(c), veh/h	527	0	1147	0	0	1109	241	0	109			
V/C Ratio(X)	0.03	0.00	0.41	0.00	0.00	0.42	0.09	0.00	0.14			
Avail Cap(c_a), veh/h	527	0	1147	0	0	1109	355	0	160			
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.93	0.00	0.93	0.00	0.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	1.0	0.0	0.0	0.0	0.0	6.2	32.1	0.0	32.3			
Incr Delay (d2), s/veh	0.1	0.0	1.0	0.0	0.0	1.2	0.2	0.0	0.6			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.3	0.0	0.0	5.2	0.4	0.0	0.3			
LnGrp Delay(d),s/veh	1.1	0.0	1.0	0.0	0.0	7.4	32.3	0.0	32.9			
LnGrp LOS	A		A			A	C		C			
Approach Vol, veh/h		487			462			36				
Approach Delay, s/veh		1.0			7.4			32.5				
Approach LOS		A			A			C				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		65.4				65.4		19.6				
Change Period (Y+Rc), s		8.0				8.0		8.0				
Max Green Setting (Gmax), s		52.0				52.0		17.0				
Max Q Clear Time (g_c+I1), s		13.1				12.8		3.4				
Green Ext Time (p_c), s		4.9				4.9		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay			5.1									
HCM 2010 LOS			A									

HCM 2010 Signalized Intersection Summary
7: 5th Ave (SR 68) & South Street

Existing Year 2015 MIDDAY Peak Hour

11/10/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	5	25	20	131	32	19	30	313	34	4	303	3
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.99	0.99		0.99	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
Adj Sat Flow, veh/h/ln	1919	1841	1919	1881	1837	1881	1881	1795	1881	1948	1877	1948
Adj Flow Rate, veh/h	8	36	32	164	40	32	44	329	40	12	319	8
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.63	0.69	0.63	0.80	0.80	0.59	0.68	0.95	0.85	0.33	0.95	0.38
Percent Heavy Veh, %	0	0	0	6	6	6	0	5	5	0	3	3
Cap, veh/h	120	209	163	373	76	46	379	737	90	486	516	13
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.03	0.47	0.47	0.28	0.28	0.28
Sat Flow, veh/h	68	907	710	928	332	198	1791	1570	191	1053	1823	46
Grp Volume(v), veh/h	76	0	0	236	0	0	44	0	369	12	0	327
Grp Sat Flow(s),veh/h/ln	1685	0	0	1458	0	0	1791	0	1761	1053	0	1869
Q Serve(g_s), s	0.0	0.0	0.0	4.2	0.0	0.0	0.6	0.0	5.4	0.3	0.0	5.8
Cycle Q Clear(g_c), s	1.4	0.0	0.0	5.5	0.0	0.0	0.6	0.0	5.4	0.3	0.0	5.8
Prop In Lane	0.11		0.42	0.69		0.14	1.00		0.11	1.00		0.02
Lane Grp Cap(c), veh/h	492	0	0	495	0	0	379	0	826	486	0	529
V/C Ratio(X)	0.15	0.00	0.00	0.48	0.00	0.00	0.12	0.00	0.45	0.02	0.00	0.62
Avail Cap(c_a), veh/h	1400	0	0	1270	0	0	795	0	2807	1426	0	2198
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.9	0.0	0.0	13.3	0.0	0.0	8.7	0.0	6.8	9.9	0.0	11.9
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.7	0.0	0.0	0.1	0.0	0.4	0.0	0.0	1.2
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	0.7	0.0	0.0	2.3	0.0	0.0	0.3	0.0	2.6	0.1	0.0	3.2
LnGrp Delay(d),s/veh	12.0	0.0	0.0	14.1	0.0	0.0	8.9	0.0	7.2	10.0	0.0	13.1
LnGrp LOS	B			B			A		A	A		B
Approach Vol, veh/h		76			236			413			339	
Approach Delay, s/veh		12.0			14.1			7.4			13.0	
Approach LOS		B			B			A			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		24.0		14.3	7.1	16.8		14.3				
Change Period (Y+Rc), s		6.0		5.5	6.0	6.0		5.5				
Max Green Setting (Gmax), s		61.0		30.0	10.0	45.0		30.0				
Max Q Clear Time (g_c+I1), s		7.4		3.4	2.6	7.8		7.5				
Green Ext Time (p_c), s		3.0		1.2	0.0	3.0		1.2				
Intersection Summary												
HCM 2010 Ctrl Delay				11.0								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
8: Route 68 & Clarion Mall Drive/Kane Drive

Existing Year 2015 Midday Peak Hour

11/10/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	95	10	84	10	12	16	63	352	19	49	336	35
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1996	1963	1919	1996	1900	1996	1791	1829	1881	1919	1863	1919
Adj Flow Rate, veh/h	100	20	0	20	24	24	80	367	24	72	382	0
Adj No. of Lanes	0	1	1	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.50	0.88	0.50	0.50	0.67	0.79	0.96	0.79	0.68	0.88	0.88
Percent Heavy Veh, %	0	0	4	0	0	0	5	3	3	0	3	3
Cap, veh/h	190	26	222	76	76	59	743	1365	89	786	1314	0
Arrive On Green	0.09	0.09	0.00	0.09	0.09	0.09	0.04	0.80	0.80	0.71	0.71	0.00
Sat Flow, veh/h	1368	274	1631	346	807	629	1706	1699	111	1019	1863	0
Grp Volume(v), veh/h	120	0	0	68	0	0	80	0	391	72	382	0
Grp Sat Flow(s),veh/h/ln	1642	0	1631	1781	0	0	1706	0	1810	1019	1863	0
Q Serve(g_s), s	3.6	0.0	0.0	0.0	0.0	0.0	1.2	0.0	5.8	2.4	8.1	0.0
Cycle Q Clear(g_c), s	7.4	0.0	0.0	3.8	0.0	0.0	1.2	0.0	5.8	2.4	8.1	0.0
Prop In Lane	0.83		1.00	0.29		0.35	1.00		0.06	1.00		0.00
Lane Grp Cap(c), veh/h	216	0	222	210	0	0	743	0	1454	786	1314	0
V/C Ratio(X)	0.56	0.00	0.00	0.32	0.00	0.00	0.11	0.00	0.27	0.09	0.29	0.00
Avail Cap(c_a), veh/h	494	0	526	515	0	0	1308	0	1454	786	1314	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.98	0.00	0.98	1.00	1.00	0.00
Uniform Delay (d), s/veh	47.1	0.0	0.0	45.7	0.0	0.0	3.6	0.0	2.6	5.0	5.9	0.0
Incr Delay (d2), s/veh	2.2	0.0	0.0	0.9	0.0	0.0	0.1	0.0	0.4	0.2	0.6	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	3.6	0.0	0.0	1.9	0.0	0.0	0.6	0.0	3.0	0.7	4.3	0.0
LnGrp Delay(d),s/veh	49.3	0.0	0.0	46.6	0.0	0.0	3.7	0.0	3.1	5.2	6.4	0.0
LnGrp LOS	D			D			A		A	A	A	
Approach Vol, veh/h		120			68			471			454	
Approach Delay, s/veh		49.3			46.6			3.2			6.2	
Approach LOS		D			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		92.0		15.0	10.5	81.4		15.0				
Change Period (Y+Rc), s		6.0		5.0	6.0	6.0		5.0				
Max Green Setting (Gmax), s		66.0		30.0	40.0	20.0		30.0				
Max Q Clear Time (g_c+l1), s		7.8		9.4	3.2	10.1		5.8				
Green Ext Time (p_c), s		29.3		0.7	0.3	7.8		0.7				
Intersection Summary												
HCM 2010 Ctrl Delay			12.0									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary
9: Route 68 & Perkins Drive/Commerical Drive

Existing Year 2015 Midday Peak Hour

11/10/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	175	30	200	33	38	5	198	189	13	31	179	146
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1919	1903	1881	1900	1876	1900	1844	1831	1881	1863	1810	1900
Adj Flow Rate, veh/h	208	40	244	48	52	12	233	220	24	48	208	164
Adj No. of Lanes	0	1	1	0	1	0	1	1	0	1	1	1
Peak Hour Factor	0.84	0.75	0.82	0.69	0.73	0.42	0.85	0.86	0.54	0.65	0.86	0.89
Percent Heavy Veh, %	0	0	2	0	0	0	2	3	3	3	6	1
Cap, veh/h	263	39	670	46	39	5	267	885	97	63	776	692
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.15	0.55	0.55	0.04	0.43	0.43
Sat Flow, veh/h	760	146	1596	0	146	18	1756	1623	177	1774	1810	1615
Grp Volume(v), veh/h	248	0	244	112	0	0	233	0	244	48	208	164
Grp Sat Flow(s),veh/h/ln	906	0	1596	164	0	0	1756	0	1800	1774	1810	1615
Q Serve(g_s), s	0.0	0.0	11.7	0.0	0.0	0.0	14.5	0.0	8.0	3.0	8.3	7.2
Cycle Q Clear(g_c), s	30.0	0.0	11.7	30.0	0.0	0.0	14.5	0.0	8.0	3.0	8.3	7.2
Prop In Lane	0.84		1.00	0.43		0.11	1.00		0.10	1.00		1.00
Lane Grp Cap(c), veh/h	302	0	670	90	0	0	267	0	981	63	776	692
V/C Ratio(X)	0.82	0.00	0.36	1.25	0.00	0.00	0.87	0.00	0.25	0.77	0.27	0.24
Avail Cap(c_a), veh/h	302	0	670	90	0	0	392	0	981	396	776	692
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	0.00	1.00	0.00	1.00	0.95	0.95	0.95
Uniform Delay (d), s/veh	41.3	0.0	22.3	42.0	0.0	0.0	46.5	0.0	13.4	53.6	20.7	20.4
Incr Delay (d2), s/veh	16.5	0.0	0.3	175.8	0.0	0.0	13.7	0.0	0.6	16.7	0.8	0.8
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	9.0	0.0	5.2	7.1	0.0	0.0	8.1	0.0	4.1	1.8	4.3	3.4
LnGrp Delay(d),s/veh	57.8	0.0	22.6	217.8	0.0	0.0	60.2	0.0	14.0	70.3	21.5	21.1
LnGrp LOS	E		C	F			E		B	E	C	C
Approach Vol, veh/h		492			112			477			420	
Approach Delay, s/veh		40.3			217.8			36.6			26.9	
Approach LOS		D			F			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	67.0		35.0	23.0	54.0		35.0				
Change Period (Y+Rc), s	6.0	6.0		5.0	6.0	6.0		5.0				
Max Green Setting (Gmax), s	25.0	40.0		30.0	25.0	40.0		30.0				
Max Q Clear Time (g_c+I1), s	5.0	10.0		32.0	16.5	10.3		32.0				
Green Ext Time (p_c), s	0.1	8.2		0.0	0.5	8.2		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			48.6									
HCM 2010 LOS			D									

Intersection												
Int Delay, s/veh	0.6											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	38	411	39	31	467	31	0	0	0	0	0	0
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, %	-	1	-	-	1	-	-	1	-	-	1	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	1	1	1	1	1	1	0	0	0	0	0	0
Mvmt Flow	42	457	43	34	519	34	0	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	553	0	0	500	0	0	1168	1185	478
Stage 1	-	-	-	-	-	-	563	563	-
Stage 2	-	-	-	-	-	-	605	622	-
Critical Hdwy	4.11	-	-	4.11	-	-	6.6	6.7	6.3
Critical Hdwy Stg 1	-	-	-	-	-	-	5.6	5.7	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.6	5.7	-
Follow-up Hdwy	2.209	-	-	2.209	-	-	3.5	4	3.3
Pot Cap-1 Maneuver	1022	-	-	1069	-	-	202	178	584
Stage 1	-	-	-	-	-	-	556	496	-
Stage 2	-	-	-	-	-	-	531	466	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1022	-	-	1069	-	-	182	0	584
Mov Cap-2 Maneuver	-	-	-	-	-	-	182	0	-
Stage 1	-	-	-	-	-	-	524	0	-
Stage 2	-	-	-	-	-	-	507	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0.7	0.5	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR
Capacity (veh/h)	-	1022	-	-	1069	-	-
HCM Lane V/C Ratio	-	0.041	-	-	0.032	-	-
HCM Control Delay (s)	0	8.7	0	-	8.5	0	-
HCM Lane LOS	A	A	A	-	A	A	-
HCM 95th %tile Q(veh)	-	0.1	-	-	0.1	-	-

HCM 2010 Signalized Intersection Summary
1: Second Avenue & Main Street (SR 322)

Existing Year 2015 PM Peak Hour

11/10/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	36	342	14	8	381	43	16	24	1	62	17	36
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.99		0.98	0.98		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1956	1895	1956	2016	1917	2016	1966	1966	1966	1966	1946	1966
Adj Flow Rate, veh/h	60	398	20	12	448	64	24	32	4	72	24	52
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.60	0.86	0.70	0.67	0.85	0.67	0.67	0.75	0.25	0.86	0.71	0.69
Percent Heavy Veh, %	3	3	3	6	6	6	0	0	0	0	0	0
Cap, veh/h	164	1012	48	78	1075	151	165	183	18	196	60	84
Arrive On Green	0.66	0.66	0.66	0.66	0.66	0.66	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	133	1528	73	13	1623	228	471	1220	121	637	398	561
Grp Volume(v), veh/h	478	0	0	524	0	0	60	0	0	148	0	0
Grp Sat Flow(s),veh/h/ln	1734	0	0	1863	0	0	1812	0	0	1596	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	0.0	0.0
Cycle Q Clear(g_c), s	6.1	0.0	0.0	7.0	0.0	0.0	1.4	0.0	0.0	4.5	0.0	0.0
Prop In Lane	0.13		0.04	0.02		0.12	0.40		0.07	0.49		0.35
Lane Grp Cap(c), veh/h	1225	0	0	1303	0	0	366	0	0	340	0	0
V/C Ratio(X)	0.39	0.00	0.00	0.40	0.00	0.00	0.16	0.00	0.00	0.44	0.00	0.00
Avail Cap(c_a), veh/h	1682	0	0	1812	0	0	741	0	0	689	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	4.1	0.0	0.0	4.2	0.0	0.0	19.9	0.0	0.0	21.1	0.0	0.0
Incr Delay (d2), s/veh	0.7	0.0	0.0	0.7	0.0	0.0	0.2	0.0	0.0	0.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	0.0	0.0	3.8	0.0	0.0	0.8	0.0	0.0	2.1	0.0	0.0
LnGrp Delay(d),s/veh	4.8	0.0	0.0	4.9	0.0	0.0	20.1	0.0	0.0	22.0	0.0	0.0
LnGrp LOS	A			A			C			C		
Approach Vol, veh/h		478			524			60			148	
Approach Delay, s/veh		4.8			4.9			20.1			22.0	
Approach LOS		A			A			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		40.3		13.0		40.3		13.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		50.0		20.0		50.0		20.0				
Max Q Clear Time (g_c+l1), s		8.1		6.5		9.0		3.4				
Green Ext Time (p_c), s		26.7		0.7		26.3		0.7				
Intersection Summary												
HCM 2010 Ctrl Delay			7.7									
HCM 2010 LOS			A									

HCM 2010 Signalized Intersection Summary
 2: 5th Ave (SR 68)/5th Ave (SR 1005) & Main Street (SR 322)

Existing Year 2015 PM Peak Hour

11/10/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	340	155	120	338	20	155	115	115	43	185	25
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	0.99		0.99
Parking Bus, Adj	1.00	1.00	0.89	1.00	1.00	0.89	1.00	1.00	0.89	1.00	1.00	0.89
Adj Sat Flow, veh/h/ln	1693	1660	1660	1668	1735	1770	1676	1734	1743	1693	1761	1761
Adj Flow Rate, veh/h	21	362	165	145	407	24	168	125	125	49	213	29
Adj No. of Lanes	0	1	1	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.94	0.94	0.94	0.83	0.83	0.83	0.92	0.92	0.92	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	0	0	0	0	0	0
Cap, veh/h	56	589	560	174	789	47	230	230	230	259	252	34
Arrive On Green	0.37	0.37	0.37	0.11	0.55	0.55	0.07	0.33	0.33	0.19	0.19	0.19
Sat Flow, veh/h	43	1576	1247	1589	1443	85	1596	706	706	1013	1348	184
Grp Volume(v), veh/h	383	0	165	145	0	431	168	0	250	49	0	242
Grp Sat Flow(s),veh/h/ln	1619	0	1247	1589	0	1529	1596	0	1412	1013	0	1532
Q Serve(g_s), s	0.0	0.0	7.9	8.4	0.0	16.7	7.0	0.0	13.6	3.9	0.0	14.3
Cycle Q Clear(g_c), s	17.7	0.0	7.9	8.4	0.0	16.7	7.0	0.0	13.6	4.6	0.0	14.3
Prop In Lane	0.05		1.00	1.00		0.06	1.00		0.50	1.00		0.12
Lane Grp Cap(c), veh/h	645	0	560	174	0	836	230	0	460	259	0	287
V/C Ratio(X)	0.59	0.00	0.29	0.83	0.00	0.52	0.73	0.00	0.54	0.19	0.00	0.84
Avail Cap(c_a), veh/h	645	0	560	220	0	836	230	0	466	285	0	326
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)	0.91	0.00	0.91	0.76	0.00	0.76	0.61	0.00	0.61	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.0	0.0	16.5	41.0	0.0	13.4	30.3	0.0	26.0	33.2	0.0	36.9
Incr Delay (d2), s/veh	3.7	0.0	1.2	15.4	0.0	1.7	7.0	0.0	0.8	0.3	0.0	16.5
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	8.7	0.0	2.9	4.4	0.0	7.3	1.7	0.0	5.4	1.1	0.0	7.4
LnGrp Delay(d),s/veh	27.6	0.0	17.7	56.4	0.0	15.2	37.3	0.0	26.8	33.5	0.0	53.4
LnGrp LOS	C		B	E		B	D		C	C		D
Approach Vol, veh/h		548			576			418			291	
Approach Delay, s/veh		24.6			25.6			31.0			50.0	
Approach LOS		C			C			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4		6		8				
Phs Duration (G+Y+Rc), s	16.3	41.1	13.0	23.6		57.4		36.6				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0		6.0		6.0				
Max Green Setting (Gmax), s	13.0	30.0	7.0	20.0		49.0		31.0				
Max Q Clear Time (g_c+l1), s	10.4	19.7	9.0	16.3		18.7		15.6				
Green Ext Time (p_c), s	0.1	3.3	0.0	0.9		4.6		2.2				
Intersection Summary												
HCM 2010 Ctrl Delay			30.4									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
3: 6th Ave & Main Street (SR 322)

Existing Year 2015 PM Peak Hour

11/10/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	18	463	17	22	391	18	71	29	32	49	21	16
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.99		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	0.89	1.00	1.00	0.89	1.00	1.00	0.89	1.00	1.00	0.89
Adj Sat Flow, veh/h/ln	1770	1735	1770	1770	1735	1770	1701	1685	1701	1701	1701	1701
Adj Flow Rate, veh/h	19	493	18	27	471	22	113	46	51	86	37	28
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.94	0.94	0.94	0.83	0.83	0.83	0.63	0.63	0.63	0.57	0.57	0.57
Percent Heavy Veh, %	2	2	2	2	2	2	1	1	1	0	0	0
Cap, veh/h	55	886	32	66	857	39	178	67	59	178	70	42
Arrive On Green	0.62	0.62	0.62	0.62	0.62	0.62	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	24	1433	51	40	1386	63	568	321	285	562	336	204
Grp Volume(v), veh/h	530	0	0	520	0	0	210	0	0	151	0	0
Grp Sat Flow(s),veh/h/ln	1509	0	0	1488	0	0	1174	0	0	1101	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	18.5	0.0	0.0	18.1	0.0	0.0	15.9	0.0	0.0	11.6	0.0	0.0
Prop In Lane	0.04		0.03	0.05		0.04	0.54		0.24	0.57		0.19
Lane Grp Cap(c), veh/h	973	0	0	961	0	0	304	0	0	290	0	0
V/C Ratio(X)	0.54	0.00	0.00	0.54	0.00	0.00	0.69	0.00	0.00	0.52	0.00	0.00
Avail Cap(c_a), veh/h	973	0	0	961	0	0	443	0	0	429	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.54	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	10.2	0.0	0.0	10.2	0.0	0.0	35.0	0.0	0.0	33.2	0.0	0.0
Incr Delay (d2), s/veh	1.2	0.0	0.0	2.2	0.0	0.0	2.8	0.0	0.0	1.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.1	0.0	0.0	8.1	0.0	0.0	5.4	0.0	0.0	3.6	0.0	0.0
LnGrp Delay(d),s/veh	11.4	0.0	0.0	12.3	0.0	0.0	37.8	0.0	0.0	34.7	0.0	0.0
LnGrp LOS	B			B			D			C		
Approach Vol, veh/h		530			520			210			151	
Approach Delay, s/veh		11.4			12.3			37.8			34.7	
Approach LOS		B			B			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		64.9		27.1		64.9		27.1				
Change Period (Y+Rc), s		8.0		8.0		8.0		8.0				
Max Green Setting (Gmax), s		46.0		30.0		46.0		30.0				
Max Q Clear Time (g_c+I1), s		20.5		13.6		20.1		17.9				
Green Ext Time (p_c), s		5.4		1.4		5.4		1.2				
Intersection Summary												
HCM 2010 Ctrl Delay			18.2									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary
5: 8th Ave (SR 1007)/8th Ave & Main Street (SR 322)

Existing Year 2015 PM Peak Hour

11/10/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	5	321	148	90	311	6	227	51	125	29	74	16
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	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
Adj Sat Flow, veh/h/ln	1727	1710	1710	1676	1676	1693	1719	1719	1719	1761	1761	1761
Adj Flow Rate, veh/h	5	341	157	98	338	7	258	58	142	40	101	22
Adj No. of Lanes	0	1	1	1	1	0	0	1	1	0	1	0
Peak Hour Factor	0.94	0.94	0.94	0.92	0.92	0.92	0.88	0.88	0.88	0.73	0.73	0.73
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	0	0	0
Cap, veh/h	42	610	518	290	587	12	264	43	677	49	99	15
Arrive On Green	0.72	0.72	0.72	0.72	0.72	0.72	0.47	0.47	0.47	0.47	0.47	0.47
Sat Flow, veh/h	6	1699	1443	805	1636	34	413	93	1448	0	212	33
Grp Volume(v), veh/h	346	0	157	98	0	345	316	0	142	163	0	0
Grp Sat Flow(s),veh/h/ln	1705	0	1443	805	0	1670	506	0	1448	245	0	0
Q Serve(g_s), s	0.0	0.0	3.6	7.0	0.0	9.2	0.0	0.0	5.3	0.0	0.0	0.0
Cycle Q Clear(g_c), s	8.8	0.0	3.6	15.9	0.0	9.2	43.0	0.0	5.3	43.0	0.0	0.0
Prop In Lane	0.01		1.00	1.00		0.02	0.82		1.00	0.25		0.13
Lane Grp Cap(c), veh/h	651	0	518	290	0	599	308	0	677	163	0	0
V/C Ratio(X)	0.53	0.00	0.30	0.34	0.00	0.58	1.03	0.00	0.21	1.00	0.00	0.00
Avail Cap(c_a), veh/h	651	0	518	290	0	599	308	0	677	163	0	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.92	0.00	0.92	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	9.6	0.0	8.8	13.4	0.0	9.6	29.5	0.0	14.5	27.4	0.0	0.0
Incr Delay (d2), s/veh	3.1	0.0	1.5	2.9	0.0	3.7	58.5	0.0	0.2	69.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	0.0	1.6	1.8	0.0	4.6	12.8	0.0	2.2	6.1	0.0	0.0
LnGrp Delay(d),s/veh	12.7	0.0	10.4	16.2	0.0	13.3	88.0	0.0	14.6	97.1	0.0	0.0
LnGrp LOS	B		B	B		B	F		B	F		
Approach Vol, veh/h		503			443			458			163	
Approach Delay, s/veh		11.9			13.9			65.2			97.1	
Approach LOS		B			B			E			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		41.0		51.0		41.0		51.0				
Change Period (Y+Rc), s		8.0		8.0		8.0		8.0				
Max Green Setting (Gmax), s		33.0		43.0		33.0		43.0				
Max Q Clear Time (g_c+l1), s		10.8		45.0		17.9		45.0				
Green Ext Time (p_c), s		4.6		0.0		4.1		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			36.9									
HCM 2010 LOS			D									

HCM 2010 Signalized Intersection Summary
6: 9th Ave & Main Street (SR 322)

Existing Year 2015 PM Peak Hour

11/10/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	21	435	19	0	391	52	16	28	30	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.95			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1626	1693	1727	0	1644	1693	1805	1770	1770			
Adj Flow Rate, veh/h	23	468	20	0	434	58	25	44	47			
Adj No. of Lanes	1	1	0	0	1	0	0	1	1			
Peak Hour Factor	0.93	0.93	0.93	0.90	0.90	0.90	0.64	0.64	0.64			
Percent Heavy Veh, %	2	2	2	0	3	3	2	2	2			
Cap, veh/h	585	1217	52	0	1069	143	45	79	102			
Arrive On Green	1.00	1.00	1.00	0.00	0.75	0.75	0.07	0.07	0.07			
Sat Flow, veh/h	783	1612	69	0	1415	189	630	1108	1430			
Grp Volume(v), veh/h	23	0	488	0	0	492	69	0	47			
Grp Sat Flow(s),veh/h/ln	783	0	1680	0	0	1605	1738	0	1430			
Q Serve(g_s), s	0.4	0.0	0.0	0.0	0.0	10.0	3.5	0.0	2.9			
Cycle Q Clear(g_c), s	10.4	0.0	0.0	0.0	0.0	10.0	3.5	0.0	2.9			
Prop In Lane	1.00		0.04	0.00		0.12	0.36		1.00			
Lane Grp Cap(c), veh/h	585	0	1269	0	0	1211	124	0	102			
V/C Ratio(X)	0.04	0.00	0.38	0.00	0.00	0.41	0.56	0.00	0.46			
Avail Cap(c_a), veh/h	585	0	1269	0	0	1211	359	0	295			
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.92	0.00	0.92	0.00	0.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.7	0.0	0.0	0.0	0.0	4.0	41.3	0.0	41.0			
Incr Delay (d2), s/veh	0.1	0.0	0.8	0.0	0.0	1.0	3.9	0.0	3.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.3	0.0	0.0	4.7	1.8	0.0	1.2			
LnGrp Delay(d),s/veh	0.9	0.0	0.8	0.0	0.0	5.0	45.2	0.0	44.3			
LnGrp LOS	A		A			A	D		D			
Approach Vol, veh/h		511			492			116				
Approach Delay, s/veh		0.8			5.0			44.9				
Approach LOS		A			A			D				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		77.5				77.5		14.5				
Change Period (Y+Rc), s		8.0				8.0		8.0				
Max Green Setting (Gmax), s		57.0				57.0		19.0				
Max Q Clear Time (g_c+l1), s		12.4				12.0		5.5				
Green Ext Time (p_c), s		2.9				2.9		0.3				
Intersection Summary												
HCM 2010 Ctrl Delay			7.2									
HCM 2010 LOS			A									

HCM 2010 Signalized Intersection Summary
7: 5th Ave (SR 68) & South Street

Existing Year 2015 PM Peak Hour

11/10/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	4	52	66	170	70	15	53	436	38	8	316	3
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.99	0.99		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1919	1854	1919	1881	1847	1881	1881	1831	1881	1948	1928	1948
Adj Flow Rate, veh/h	4	72	105	227	96	24	72	519	56	12	351	4
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	1.00	0.72	0.63	0.75	0.73	0.63	0.74	0.84	0.68	0.67	0.90	0.75
Percent Heavy Veh, %	0	0	0	1	1	1	0	3	3	0	1	1
Cap, veh/h	71	212	297	389	137	31	386	776	84	336	616	7
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.04	0.48	0.48	0.32	0.32	0.32
Sat Flow, veh/h	9	689	965	904	443	100	1791	1624	175	869	1903	22
Grp Volume(v), veh/h	181	0	0	347	0	0	72	0	575	12	0	355
Grp Sat Flow(s),veh/h/ln	1663	0	0	1447	0	0	1791	0	1799	869	0	1924
Q Serve(g_s), s	0.0	0.0	0.0	6.6	0.0	0.0	1.3	0.0	13.2	0.6	0.0	8.2
Cycle Q Clear(g_c), s	4.5	0.0	0.0	11.2	0.0	0.0	1.3	0.0	13.2	5.5	0.0	8.2
Prop In Lane	0.02		0.58	0.65		0.07	1.00		0.10	1.00		0.01
Lane Grp Cap(c), veh/h	581	0	0	557	0	0	386	0	860	336	0	623
V/C Ratio(X)	0.31	0.00	0.00	0.62	0.00	0.00	0.19	0.00	0.67	0.04	0.00	0.57
Avail Cap(c_a), veh/h	994	0	0	891	0	0	643	0	2043	783	0	1612
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.4	0.0	0.0	16.4	0.0	0.0	11.0	0.0	10.8	16.0	0.0	15.1
Incr Delay (d2), s/veh	0.4	0.0	0.0	1.6	0.0	0.0	0.3	0.0	1.3	0.1	0.0	1.2
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	2.1	0.0	0.0	4.9	0.0	0.0	0.7	0.0	6.7	0.1	0.0	4.5
LnGrp Delay(d),s/veh	14.9	0.0	0.0	18.0	0.0	0.0	11.3	0.0	12.0	16.1	0.0	16.2
LnGrp LOS	B			B			B		B	B		B
Approach Vol, veh/h		181			347			647			367	
Approach Delay, s/veh		14.9			18.0			12.0			16.2	
Approach LOS		B			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		31.7		22.0	8.3	23.4		22.0				
Change Period (Y+Rc), s		6.0		5.5	6.0	6.0		5.5				
Max Green Setting (Gmax), s		61.0		30.0	10.0	45.0		30.0				
Max Q Clear Time (g_c+I1), s		15.2		6.5	3.3	10.2		13.2				
Green Ext Time (p_c), s		7.4		3.5	0.1	7.2		3.2				
Intersection Summary												
HCM 2010 Ctrl Delay			14.7									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary
8: Route 68 & Clarion Mall Drive/Kane Drive

Existing Year 2015 PM Peak Hour

11/10/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	118	7	91	20	7	26	48	399	10	26	445	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1996	1996	1919	1996	1958	1996	1844	1828	1881	1845	1884	1919
Adj Flow Rate, veh/h	140	16	0	28	16	40	60	481	16	32	530	0
Adj No. of Lanes	0	1	1	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.84	0.44	0.88	0.71	0.44	0.65	0.80	0.83	0.63	0.81	0.84	0.75
Percent Heavy Veh, %	0	0	4	0	0	0	2	3	3	4	2	2
Cap, veh/h	233	20	264	98	63	107	615	1366	45	673	1288	0
Arrive On Green	0.12	0.12	0.00	0.12	0.12	0.12	0.08	1.00	1.00	0.68	0.68	0.00
Sat Flow, veh/h	1384	158	1631	439	512	865	1756	1759	59	888	1884	0
Grp Volume(v), veh/h	156	0	0	84	0	0	60	0	497	32	530	0
Grp Sat Flow(s),veh/h/ln	1542	0	1631	1816	0	0	1756	0	1818	888	1884	0
Q Serve(g_s), s	6.1	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.3	13.6	0.0
Cycle Q Clear(g_c), s	10.7	0.0	0.0	4.7	0.0	0.0	1.0	0.0	0.0	1.3	13.6	0.0
Prop In Lane	0.90		1.00	0.33		0.48	1.00		0.03	1.00		0.00
Lane Grp Cap(c), veh/h	252	0	264	268	0	0	615	0	1412	673	1288	0
V/C Ratio(X)	0.62	0.00	0.00	0.31	0.00	0.00	0.10	0.00	0.35	0.05	0.41	0.00
Avail Cap(c_a), veh/h	473	0	507	512	0	0	1027	0	1412	673	1288	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.93	0.00	0.93	1.00	1.00	0.00
Uniform Delay (d), s/veh	46.8	0.0	0.0	44.3	0.0	0.0	4.8	0.0	0.0	5.7	7.6	0.0
Incr Delay (d2), s/veh	2.5	0.0	0.0	0.7	0.0	0.0	0.1	0.0	0.6	0.1	1.0	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	4.8	0.0	0.0	2.4	0.0	0.0	0.5	0.0	0.3	0.3	7.4	0.0
LnGrp Delay(d),s/veh	49.3	0.0	0.0	45.0	0.0	0.0	4.9	0.0	0.6	5.8	8.6	0.0
LnGrp LOS	D			D			A		A	A	A	
Approach Vol, veh/h		156			84			557			562	
Approach Delay, s/veh		49.3			45.0			1.1			8.5	
Approach LOS		D			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		91.4		18.6	10.2	81.2		18.6				
Change Period (Y+Rc), s		6.0		5.0	6.0	6.0		5.0				
Max Green Setting (Gmax), s		69.0		30.0	30.0	33.0		30.0				
Max Q Clear Time (g_c+I1), s		2.0		12.7	3.0	15.6		6.7				
Green Ext Time (p_c), s		43.4		0.9	0.2	14.8		0.9				
Intersection Summary												
HCM 2010 Ctrl Delay			12.4									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary
9: Route 68 & Perkins Drive/Commerical Drive

Existing Year 2015 PM Peak Hour

11/10/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	217	26	314	67	21	2	164	252	10	39	301	213
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1919	1902	1919	1900	1871	1900	1809	1847	1881	1828	1881	1919
Adj Flow Rate, veh/h	268	36	357	124	32	4	176	319	24	48	372	248
Adj No. of Lanes	0	1	1	0	1	0	1	1	0	1	1	1
Peak Hour Factor	0.81	0.72	0.88	0.54	0.66	0.50	0.93	0.79	0.42	0.81	0.81	0.86
Percent Heavy Veh, %	0	0	0	0	0	0	4	2	2	5	2	0
Cap, veh/h	426	49	644	135	30	3	210	911	69	62	848	735
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.12	0.54	0.54	0.01	0.15	0.15
Sat Flow, veh/h	1335	179	1631	283	108	10	1723	1696	128	1741	1881	1631
Grp Volume(v), veh/h	304	0	357	160	0	0	176	0	343	48	372	248
Grp Sat Flow(s),veh/h/ln	1515	0	1631	401	0	0	1723	0	1824	1741	1881	1631
Q Serve(g_s), s	0.0	0.0	18.7	9.9	0.0	0.0	11.0	0.0	11.8	3.0	19.8	15.0
Cycle Q Clear(g_c), s	20.1	0.0	18.7	30.0	0.0	0.0	11.0	0.0	11.8	3.0	19.8	15.0
Prop In Lane	0.88		1.00	0.77		0.02	1.00		0.07	1.00		1.00
Lane Grp Cap(c), veh/h	475	0	644	168	0	0	210	0	979	62	848	735
V/C Ratio(X)	0.64	0.00	0.55	0.95	0.00	0.00	0.84	0.00	0.35	0.77	0.44	0.34
Avail Cap(c_a), veh/h	475	0	644	168	0	0	470	0	979	475	848	735
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	0.89	0.89	0.89
Uniform Delay (d), s/veh	36.4	0.0	25.8	50.1	0.0	0.0	47.2	0.0	14.5	53.9	34.1	32.1
Incr Delay (d2), s/veh	2.9	0.0	1.0	56.1	0.0	0.0	8.6	0.0	1.0	15.9	1.5	1.1
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	8.7	0.0	8.6	7.5	0.0	0.0	5.7	0.0	6.2	1.7	10.7	7.0
LnGrp Delay(d),s/veh	39.3	0.0	26.8	106.2	0.0	0.0	55.8	0.0	15.5	69.8	35.6	33.2
LnGrp LOS	D		C	F			E		B	E	D	C
Approach Vol, veh/h		661			160			519			668	
Approach Delay, s/veh		32.6			106.2			29.2			37.2	
Approach LOS		C			F			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.9	65.1		35.0	19.4	55.6		35.0				
Change Period (Y+Rc), s	6.0	6.0		5.0	6.0	6.0		5.0				
Max Green Setting (Gmax), s	30.0	33.0		30.0	30.0	33.0		30.0				
Max Q Clear Time (g_c+I1), s	5.0	13.8		22.1	13.0	21.8		32.0				
Green Ext Time (p_c), s	0.1	10.7		2.4	0.5	7.2		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			39.1									
HCM 2010 LOS			D									

Intersection												
Int Delay, s/veh	0.7											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	23	471	50	62	431	61	0	0	3	0	0	0
Conflicting Peds, #/hr	0	0	0	20	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, %	-	1	-	-	1	-	-	1	-	-	1	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	0	0	0	0	0	0
Mvmt Flow	26	523	56	69	479	68	0	0	3	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	547	0	0	579	0	0	1253	1286	571
Stage 1	-	-	-	-	-	-	602	602	-
Stage 2	-	-	-	-	-	-	651	684	-
Critical Hdwy	4.12	-	-	4.12	-	-	6.6	6.7	6.3
Critical Hdwy Stg 1	-	-	-	-	-	-	5.6	5.7	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.6	5.7	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.5	4	3.3
Pot Cap-1 Maneuver	1022	-	-	995	-	-	179	154	516
Stage 1	-	-	-	-	-	-	533	476	-
Stage 2	-	-	-	-	-	-	504	435	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1022	-	-	976	-	-	154	0	506
Mov Cap-2 Maneuver	-	-	-	-	-	-	154	0	-
Stage 1	-	-	-	-	-	-	513	0	-
Stage 2	-	-	-	-	-	-	452	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0.4	1	12.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR
Capacity (veh/h)	506	1022	-	-	976	-	-
HCM Lane V/C Ratio	0.007	0.025	-	-	0.071	-	-
HCM Control Delay (s)	12.2	8.6	0	-	9	0	-
HCM Lane LOS	B	A	A	-	A	A	-
HCM 95th %tile Q(veh)	0	0.1	-	-	0.2	-	-

APPENDIX I

Existing Year 2015 Queuing

Table – Existing Year 2015 95th Percentile Queue (ft.) Summary

Intersection	Available Storage	AM Queue	Midday Queue	PM Queue
Main Street (SR 0322) with 2nd Avenue				
Eastbound (Main Street)	>1000	112	98	125
Westbound (Main Street)	>1000	164	113	144
Northbound (2 nd Avenue)	>1000	86	45	52
Southbound (2 nd Avenue)	400	73	52	79
Main Street (SR 0322) with 5th Avenue (SR 0068)				
Eastbound (Main Street)				
<i>Left Turn / Through</i>	>1000	253	220	295
<i>Right Turn</i>	100	180	159	183
Westbound (Main Street)				
<i>Left Turn</i>	50	118	142	138
<i>Through / Right Turn</i>	425	172	258	246
Northbound (5 th Avenue)				
<i>Left Turn</i>	125	106	106	151
<i>Through / Right Turn</i>	800	111	159	208
Southbound (5 th Avenue)				
<i>Left Turn</i>	>1000	110	199	238
<i>Through / Right Turn</i>	65	85	85	81
Main Street (SR 0322) with 6th Avenue				
Eastbound (Main Street)	440	163	176	245
Westbound (Main Street)	510	181	251	244
Northbound (6 th Avenue)	>1000	79	85	146
Southbound (6 th Avenue)	400	64	104	101
Main Street (SR 0322) with 7th Avenue				
Eastbound (Main Street)	510	81	95	92
Westbound (Main Street)	570	89	70	155
Northbound (7 th Avenue)	>1000	0	0	19
Main Street (SR 0322) with 8th Avenue				
Eastbound (Main Street)				
<i>Left Turn / Through</i>	530	146	171	210
<i>Right Turn</i>	150	78	81	122
Westbound (Main Street)				
<i>Left Turn</i>	110	75	63	110
<i>Through / Right Turn</i>	425	104	87	158
Northbound (8 th Avenue)				
<i>Left Turn / Through</i>	380	172	170	231
<i>Right Turn</i>	170	127	97	135
Southbound (8 th Avenue)	390	78	78	117
Main Street (SR 0322) with 9th Avenue				
Eastbound (Main Street)				
<i>Left Turn</i>	130	53	25	31
<i>Through / Right Turn</i>	420	150	157	185
Westbound (Main Street)	>1000	162	178	182
Northbound (9 th Avenue)				
<i>Left Turn / Through</i>	430	48	35	77
<i>Right Turn</i>	65	25	32	50
5th Avenue (SR 0068) with South Street				
Eastbound (South Street)	460		53	85
Westbound (South Street)	460		104	168
Northbound (5 th Avenue)				
<i>Left Turn</i>	75		43	86
<i>Through / Right Turn</i>	>1000		142	222
Southbound (5 th Avenue)				
<i>Left Turn</i>	110		15	28
<i>Through / Right Turn</i>	365		150	177

Intersection	Available Storage	AM Queue	Midday Queue	PM Queue
5 th Avenue (SR 0068)with Clarion Mall Drive / Kane Drive				
Eastbound (Clarion Mall Drive)				
<i>Left Turn / Through</i>	950		137	174
<i>Right Turn</i>	100		35	84
Westbound (Kane Drive)	560		69	75
Northbound (5 th Avenue)				
<i>Left Turn</i>	400		45	45
<i>Through / Right Turn</i>	780		120	103
Southbound (5 th Avenue)				
<i>Left Turn</i>	240		48	60
<i>Through / Right Turn</i>	>1000		119	165
5 th Avenue (SR 0068)with Perkins Drive / Commercial Drive				
Eastbound (Perkins Drive)				
<i>Left Turn / Through</i>	880		205	237
<i>Right Turn</i>	200		110	164
Westbound (Commercial Drive)	185		111	117
Northbound (5 th Avenue)				
<i>Left Turn</i>	950		217	203
<i>Through / Right Turn</i>	>1000		105	143
Southbound (5 th Avenue)				
<i>Left Turn</i>	85		83	92
<i>Through</i>	780		156	208
<i>Right Turn</i>	165	88	107	

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:30	6:30	6:30	6:30	6:30	6:30
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	90	90	90	90	90	90
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	2151	2128	2117	2171	2195	2153
Vehs Exited	2141	2132	2108	2169	2199	2149
Starting Vehs	72	62	63	86	77	67
Ending Vehs	82	58	72	88	73	74
Travel Distance (mi)	1250	1254	1245	1268	1306	1265
Travel Time (hr)	69.0	69.9	67.9	70.4	72.3	69.9
Total Delay (hr)	21.8	22.4	20.8	22.6	22.8	22.1
Total Stops	2394	2462	2329	2433	2527	2432
Fuel Used (gal)	48.3	48.7	47.3	48.8	50.1	48.6

Interval #0 Information Seeding

Start Time	6:30
End Time	7:00
Total Time (min)	30
No data recorded this interval.	

Interval #1 Information Recording

Start Time	7:00
End Time	8:00
Total Time (min)	60

Run Number	1	2	3	4	5	Avg
Vehs Entered	2151	2128	2117	2171	2195	2153
Vehs Exited	2141	2132	2108	2169	2199	2149
Starting Vehs	72	62	63	86	77	67
Ending Vehs	82	58	72	88	73	74
Travel Distance (mi)	1250	1254	1245	1268	1306	1265
Travel Time (hr)	69.0	69.9	67.9	70.4	72.3	69.9
Total Delay (hr)	21.8	22.4	20.8	22.6	22.8	22.1
Total Stops	2394	2462	2329	2433	2527	2432
Fuel Used (gal)	48.3	48.7	47.3	48.8	50.1	48.6

Queuing and Blocking Report
Existing Year 2015 AM Peak Hour

11/12/2015

Intersection: 1: Second Avenue & Main Street (SR 322)

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	170	224	109	86
Average Queue (ft)	53	83	47	38
95th Queue (ft)	112	164	86	73
Link Distance (ft)	752	1551	255	265
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 2: 5th Ave (SR 68)/5th Ave (SR 1005) & Main Street (SR 322)

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	LT	R	L	TR	L	TR	L	TR
Maximum Queue (ft)	299	175	124	222	121	142	152	75
Average Queue (ft)	148	81	69	87	58	60	48	57
95th Queue (ft)	253	180	118	172	106	111	110	85
Link Distance (ft)	1551			457		1237	899	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		100	50		125			65
Storage Blk Time (%)	17	1	29	13	0	1	3	12
Queuing Penalty (veh)	31	6	76	13	0	1	3	7

Intersection: 3: 6th Ave & Main Street (SR 322)

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	210	222	103	73
Average Queue (ft)	76	88	42	29
95th Queue (ft)	163	181	79	64
Link Distance (ft)	457	519	856	919
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Queuing and Blocking Report
Existing Year 2015 AM Peak Hour

11/12/2015

Intersection: 4: 7th Ave & Main Street (SR 322)

Movement	EB	WB
Directions Served	LTR	LTR
Maximum Queue (ft)	162	151
Average Queue (ft)	19	26
95th Queue (ft)	81	89
Link Distance (ft)	519	557
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 5: 8th Ave (SR 1007)/8th Ave & Main Street (SR 322)

Movement	EB	EB	WB	WB	NB	NB	SB
Directions Served	LT	R	L	TR	LT	R	LTR
Maximum Queue (ft)	170	95	97	129	208	178	92
Average Queue (ft)	76	33	32	49	102	58	38
95th Queue (ft)	146	78	75	104	172	127	78
Link Distance (ft)	557			406	848		927
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		150	110			170	
Storage Blk Time (%)	1		0	1	1		
Queuing Penalty (veh)	1		1	1	1		

Intersection: 6: 9th Ave & Main Street (SR 322)

Movement	EB	EB	WB	NB	NB
Directions Served	L	TR	TR	LT	R
Maximum Queue (ft)	66	174	214	53	31
Average Queue (ft)	23	86	79	19	6
95th Queue (ft)	53	150	162	48	25
Link Distance (ft)		406	1170	866	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	130				65
Storage Blk Time (%)		1		0	
Queuing Penalty (veh)		1		0	

Network Summary

Network wide Queuing Penalty: 142

SimTraffic Simulation Summary
Existing Year 2015 Midday Peak Hour

11/12/2015

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	10:30	10:30	10:30	10:30	10:30	10:30
End Time	12:00	12:00	12:00	12:00	12:00	12:00
Total Time (min)	90	90	90	90	90	90
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	3984	4125	4007	4054	3974	4029
Vehs Exited	4010	4140	4009	4074	3983	4041
Starting Vehs	141	132	124	125	132	122
Ending Vehs	115	117	122	105	123	114
Travel Distance (mi)	2264	2357	2267	2301	2259	2290
Travel Time (hr)	121.8	131.7	122.3	125.0	122.5	124.7
Total Delay (hr)	39.0	45.1	39.4	40.8	39.8	40.8
Total Stops	4208	4766	4305	4358	4333	4396
Fuel Used (gal)	85.4	90.6	85.8	87.4	85.8	87.0

Interval #0 Information Seeding

Start Time	10:30
End Time	11:00
Total Time (min)	30
No data recorded this interval.	

Interval #1 Information Recording

Start Time	11:00					
End Time	12:00					
Total Time (min)	60					
Run Number	1	2	3	4	5	Avg
Vehs Entered	3984	4125	4007	4054	3974	4029
Vehs Exited	4010	4140	4009	4074	3983	4041
Starting Vehs	141	132	124	125	132	122
Ending Vehs	115	117	122	105	123	114
Travel Distance (mi)	2264	2357	2267	2301	2259	2290
Travel Time (hr)	121.8	131.7	122.3	125.0	122.5	124.7
Total Delay (hr)	39.0	45.1	39.4	40.8	39.8	40.8
Total Stops	4208	4766	4305	4358	4333	4396
Fuel Used (gal)	85.4	90.6	85.8	87.4	85.8	87.0

Queuing and Blocking Report
Existing Year 2015 Midday Peak Hour

11/12/2015

Intersection: 1: Second Avenue & Main Street (SR 322)

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	137	150	49	62
Average Queue (ft)	43	47	21	28
95th Queue (ft)	98	113	45	52
Link Distance (ft)	752	1551	650	438
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 2: 5th Ave (SR 68)/5th Ave (SR 1005) & Main Street (SR 322)

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	LT	R	L	TR	L	TR	L	TR
Maximum Queue (ft)	253	175	124	319	144	195	224	75
Average Queue (ft)	132	73	93	133	56	87	87	68
95th Queue (ft)	220	159	142	258	106	159	199	85
Link Distance (ft)	1551			457		865	899	
Upstream Blk Time (%)				0				
Queuing Penalty (veh)				0				
Storage Bay Dist (ft)		100	50		125			65
Storage Blk Time (%)	18	1	48	24	0	3	2	29
Queuing Penalty (veh)	26	4	162	36	1	3	3	11

Intersection: 3: 6th Ave & Main Street (SR 322)

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	210	280	114	121
Average Queue (ft)	105	143	43	57
95th Queue (ft)	176	251	85	104
Link Distance (ft)	457	519	856	919
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Queuing and Blocking Report
Existing Year 2015 Midday Peak Hour

11/12/2015

Intersection: 4: 7th Ave & Main Street (SR 322)

Movement	EB	WB
Directions Served	LTR	LTR
Maximum Queue (ft)	151	102
Average Queue (ft)	26	19
95th Queue (ft)	95	70
Link Distance (ft)	519	557
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 5: 8th Ave (SR 1007)/8th Ave & Main Street (SR 322)

Movement	EB	EB	WB	WB	NB	NB	SB
Directions Served	LT	R	L	TR	LT	R	LTR
Maximum Queue (ft)	210	99	84	120	203	137	95
Average Queue (ft)	95	39	26	39	103	44	38
95th Queue (ft)	171	81	63	87	170	97	78
Link Distance (ft)	557			406	848		927
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		150	110			170	
Storage Blk Time (%)	1			0	1		
Queuing Penalty (veh)	1			0	1		

Intersection: 6: 9th Ave & Main Street (SR 322)

Movement	EB	EB	WB	NB	NB
Directions Served	L	TR	TR	LT	R
Maximum Queue (ft)	34	218	220	51	31
Average Queue (ft)	6	80	92	10	9
95th Queue (ft)	25	157	178	35	32
Link Distance (ft)		406	1170	866	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	130				65
Storage Blk Time (%)		1		0	
Queuing Penalty (veh)		0		0	

Queuing and Blocking Report
Existing Year 2015 Midday Peak Hour

11/12/2015

Intersection: 7: 5th Ave (SR 68) & South Street

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	L	TR	L	TR
Maximum Queue (ft)	61	133	52	176	24	174
Average Queue (ft)	24	63	15	80	2	83
95th Queue (ft)	53	104	43	142	15	150
Link Distance (ft)	707	760		586		865
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			75		110	
Storage Blk Time (%)			0	6		3
Queuing Penalty (veh)			0	2		0

Intersection: 8: Route 68 & Clarion Mall Drive/Kane Drive

Movement	EB	EB	WB	NB	NB	SB	SB
Directions Served	LT	R	LTR	L	TR	L	TR
Maximum Queue (ft)	167	68	84	56	168	62	145
Average Queue (ft)	80	4	32	17	52	20	55
95th Queue (ft)	137	35	69	45	120	48	119
Link Distance (ft)	1150		1100		873		1302
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		100		400		240	
Storage Blk Time (%)	8						
Queuing Penalty (veh)	6						

Intersection: 9: Route 68 & Perkins Drive/Commerical Drive

Movement	EB	EB	WB	NB	NB	SB	SB	SB
Directions Served	LT	R	LTR	L	TR	L	T	R
Maximum Queue (ft)	236	157	144	263	153	128	193	120
Average Queue (ft)	128	47	56	133	44	34	77	40
95th Queue (ft)	205	110	111	217	105	83	156	88
Link Distance (ft)	1076		1116		1241		873	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		200		950		85		165
Storage Blk Time (%)	2					1	8	
Queuing Penalty (veh)	4					3	13	

Network Summary

Network wide Queuing Penalty: 277

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	3:30	3:30	3:30	3:30	3:30	3:30
End Time	5:00	5:00	5:00	5:00	5:00	5:00
Total Time (min)	90	90	90	90	90	90
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	4894	5118	4948	4940	4982	4980
Vehs Exited	4896	5120	4986	4902	5000	4982
Starting Vehs	158	159	173	144	171	157
Ending Vehs	156	157	135	182	153	151
Travel Distance (mi)	2718	2892	2769	2746	2803	2785
Travel Time (hr)	150.3	162.6	153.4	153.8	157.4	155.5
Total Delay (hr)	50.8	57.1	52.2	53.4	54.7	53.6
Total Stops	5207	5901	5432	5516	5672	5539
Fuel Used (gal)	104.4	110.9	105.8	105.5	107.8	106.9

Interval #0 Information Seeding

Start Time	3:30
End Time	4:00
Total Time (min)	30
No data recorded this interval.	

Interval #1 Information Recording

Start Time	4:00
End Time	5:00
Total Time (min)	60

Run Number	1	2	3	4	5	Avg
Vehs Entered	4894	5118	4948	4940	4982	4980
Vehs Exited	4896	5120	4986	4902	5000	4982
Starting Vehs	158	159	173	144	171	157
Ending Vehs	156	157	135	182	153	151
Travel Distance (mi)	2718	2892	2769	2746	2803	2785
Travel Time (hr)	150.3	162.6	153.4	153.8	157.4	155.5
Total Delay (hr)	50.8	57.1	52.2	53.4	54.7	53.6
Total Stops	5207	5901	5432	5516	5672	5539
Fuel Used (gal)	104.4	110.9	105.8	105.5	107.8	106.9

Intersection: 1: Second Avenue & Main Street (SR 322)

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	164	182	58	97
Average Queue (ft)	66	70	22	44
95th Queue (ft)	125	144	52	79
Link Distance (ft)	752	1552	661	500
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 2: 5th Ave (SR 68)/5th Ave (SR 1005) & Main Street (SR 322)

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	LT	R	L	TR	L	TR	L	TR
Maximum Queue (ft)	399	175	125	276	186	274	261	75
Average Queue (ft)	161	89	87	137	81	117	115	70
95th Queue (ft)	295	183	138	246	151	208	238	81
Link Distance (ft)	1552			457		865	899	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		100	50		125			65
Storage Blk Time (%)	23	1	40	24	2	6	2	35
Queuing Penalty (veh)	35	5	142	29	4	10	5	15

Intersection: 3: 6th Ave & Main Street (SR 322)

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	306	320	186	112
Average Queue (ft)	125	128	82	55
95th Queue (ft)	245	244	146	101
Link Distance (ft)	457	519	856	919
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Queuing and Blocking Report
Existing Year 2015 PM Peak Hour

11/12/2015

Intersection: 4: 7th Ave & Main Street (SR 322)

Movement	EB	WB	NB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	129	245	29
Average Queue (ft)	24	52	4
95th Queue (ft)	92	155	19
Link Distance (ft)	519	557	879
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 5: 8th Ave (SR 1007)/8th Ave & Main Street (SR 322)

Movement	EB	EB	WB	WB	NB	NB	SB
Directions Served	LT	R	L	TR	LT	R	LTR
Maximum Queue (ft)	252	182	164	214	280	227	131
Average Queue (ft)	106	55	49	71	137	61	64
95th Queue (ft)	210	122	110	158	231	135	117
Link Distance (ft)	557			406	848		927
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		150	110			170	
Storage Blk Time (%)	4	0	1	3	5	0	
Queuing Penalty (veh)	5	0	3	3	6	0	

Intersection: 6: 9th Ave & Main Street (SR 322)

Movement	EB	EB	WB	NB	NB
Directions Served	L	TR	TR	LT	R
Maximum Queue (ft)	43	196	232	100	58
Average Queue (ft)	9	96	90	35	21
95th Queue (ft)	31	185	182	77	50
Link Distance (ft)		406	1170	866	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	130				65
Storage Blk Time (%)		3		3	0
Queuing Penalty (veh)		1		1	0

Queuing and Blocking Report
Existing Year 2015 PM Peak Hour

11/12/2015

Intersection: 7: 5th Ave (SR 68) & South Street

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	L	TR	L	TR
Maximum Queue (ft)	116	204	134	245	47	221
Average Queue (ft)	45	102	33	135	6	98
95th Queue (ft)	85	168	86	222	28	177
Link Distance (ft)	707	760		586		865
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			75		110	
Storage Blk Time (%)			0	19		6
Queuing Penalty (veh)			2	10		0

Intersection: 8: Route 68 & Clarion Mall Drive/Kane Drive

Movement	EB	EB	WB	NB	NB	SB	SB
Directions Served	LT	R	LTR	L	TR	L	TR
Maximum Queue (ft)	200	143	86	54	128	105	206
Average Queue (ft)	97	16	37	18	40	13	74
95th Queue (ft)	174	84	75	45	103	60	165
Link Distance (ft)	1150		1100		873		1302
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		100		400		240	
Storage Blk Time (%)	12	0					0
Queuing Penalty (veh)	11	0					0

Intersection: 9: Route 68 & Perkins Drive/Commerical Drive

Movement	EB	EB	WB	NB	NB	SB	SB	SB
Directions Served	LT	R	LTR	L	TR	L	T	R
Maximum Queue (ft)	265	264	140	251	170	131	280	195
Average Queue (ft)	146	78	68	114	70	40	106	49
95th Queue (ft)	237	164	117	203	143	92	208	107
Link Distance (ft)	1076		1116		1241		873	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		200		950		85		165
Storage Blk Time (%)	4	0				2	12	
Queuing Penalty (veh)	11	1				11	31	

Network Summary

Network wide Queuing Penalty: 340

APPENDIX J

Design Year 2035 HCM

Table – Design Year 2035 Level of Service Summary

Intersection	AM LOS	Midday LOS	PM LOS
	(LOS / Seconds of Delay per Vehicle)		
Main Street (SR 0322) with 2nd Avenue	B (10.8)	A (5.9)	A (8.2)
Eastbound (Main Street)	A (7.3)	A (3.5)	A (5.2)
Westbound (Main Street)	A (9.7)	A (4.0)	A (5.4)
Northbound (2 nd Avenue)	B (16.4)	B (17.0)	C (20.4)
Southbound (2 nd Avenue)	B (14.9)	B (17.8)	C (22.5)
Main Street (SR 0322) with 5th Avenue (SR 0068)	D (40.9)	C (26.4)	C (32.7)
Eastbound (Main Street)	E (57.0)	C (27.3)	C (27.3)
Left Turn / Through	E (74.3)	C (30.1)	C (30.8)
Right Turn	B (17.7)	C (21.6)	B (19.1)
Westbound (Main Street)	C (20.5)	C (21.0)	C (26.5)
Left Turn	D (42.1)	E (63.2)	E (56.8)
Through / Right Turn	B (12.4)	A (1.9)	B (16.3)
Northbound (5 th Avenue)	C (29.8)	C (23.9)	C (33.3)
Left Turn	C (32.4)	C (25.8)	D (43.0)
Through / Right Turn	C (27.5)	C (22.9)	C (26.8)
Southbound (5 th Avenue)	D (38.9)	D (38.9)	D (54.2)
Left Turn	D (38.9)	C (28.2)	C (34.2)
Through / Right Turn	D (38.8)	D (40.8)	E (58.2)
Main Street (SR 0322) with 6th Avenue	B (13.6)	B (10.7)	C (22.0)
Eastbound (Main Street)	A (6.8)	A (1.0)	B (12.7)
Westbound (Main Street)	B (10.2)	B (11.2)	C (21.7)
Northbound (6 th Avenue)	E (61.6)	C (32.2)	D (37.5)
Southbound (6 th Avenue)	D (36.3)	C (33.6)	C (33.8)
Main Street (SR 0322) with 7th Avenue	A (0.6)	A (0.6)	A (0.7)
Eastbound (Main Street)	A (0.5)	A (0.7)	A (0.4)
Westbound (Main Street)	A (0.8)	A (0.5)	A (1.0)
Northbound (7 th Avenue)	A (0.0)	A (0.0)	B (12.6)
Main Street (SR 0322) with 8th Avenue	B (18.7)	A (9.5)	D (44.9)
Eastbound (Main Street)	B (12.6)	A (1.6)	B (12.5)
Left Turn / Through	B (13.3)	A (1.9)	B (13.4)
Right Turn	B (10.6)	A (0.7)	B (10.6)
Westbound (Main Street)	A (9.0)	A (1.9)	B (15.0)
Left Turn	A (8.8)	A (0.8)	B (18.2)
Through / Right Turn	A (9.1)	A (2.1)	B (14.1)
Northbound (8 th Avenue)	D (39.4)	C (26.8)	F (86.0)
Left Turn / Through	D (45.8)	C (29.2)	F (118.0)
Right Turn	C (28.0)	C (22.0)	B (14.8)
Southbound (8 th Avenue)	C (26.8)	C (29.1)	F (111.4)
Main Street (SR 0322) with 9th Avenue	A (6.3)	A (5.4)	A (7.4)
Eastbound (Main Street)	A (4.3)	A (1.1)	A (0.9)
Left Turn	A (3.1)	A (1.4)	A (1.1)
Through / Right Turn	A (4.5)	A (1.1)	A (0.9)
Westbound (Main Street)	A (5.2)	A (7.8)	A (5.4)
Northbound (9 th Avenue)	D (38.2)	C (32.6)	D (44.7)
Left Turn / Through	D (38.6)	C (32.3)	D (45.1)
Right Turn	D (37.2)	C (33.1)	D (44.0)

Intersection	AM LOS	Midday LOS	PM LOS
	(LOS / Seconds of Delay per Vehicle)		
5th Avenue (SR 0068) with South Street		B (11.5)	B (16.5)
Eastbound (South Street)		B (12.3)	B (15.5)
Westbound (South Street)		B (14.7)	B (19.9)
Northbound (5 th Avenue)		A (7.9)	B (14.1)
Left Turn		A (9.3)	B (12.6)
Through / Right Turn		A (7.7)	B (14.2)
Southbound (5 th Avenue)		B (13.5)	B (18.1)
Left Turn		B (10.2)	B (19.6)
Through / Right Turn		B (13.7)	B (18.0)
5th Avenue (SR 0068) with Clarion Mall Drive / Kane Drive		B (11.8)	B (12.2)
Eastbound (Clarion Mall Drive)		D (49.3)	D (49.3)
Left Turn / Through		D (49.3)	D (49.3)
Right Turn		A (0.0)	A (0.0)
Westbound (Kane Drive)		D (46.6)	D (45.0)
Northbound (5 th Avenue)		A (3.3)	A (1.2)
Left Turn		A (3.8)	A (5.1)
Through / Right Turn		A (3.2)	A (0.7)
Southbound (5 th Avenue)		A (6.4)	A (8.8)
Left Turn		A (5.3)	A (5.9)
Through / Right Turn		A (6.6)	A (9.0)
5th Avenue (SR 0068) with Perkins Drive / Commercial Drive		D (48.0)	D (36.8)
Eastbound (Perkins Drive)		D (40.3)	C (32.6)
Left Turn / Through		E (57.8)	D (39.3)
Right Turn		C (22.6)	C (26.8)
Westbound (Commercial Drive)		F (217.8)	F (106.2)
Northbound (5 th Avenue)		D (35.9)	C (28.8)
Left Turn		E (60.2)	E (55.8)
Through / Right Turn		B (14.2)	B (15.9)
Southbound (5 th Avenue)		C (26.8)	C (31.1)
Left Turn		E (70.2)	E (68.9)
Through		C (21.8)	C (29.4)
Right Turn		C (21.1)	C (26.7)

HCM Signalized Intersection Capacity Analysis

1: Second Avenue & Main Street (SR 322)

Design Year 2035 w/o Improvements AM

12/16/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	19	231	12	9	467	46	71	46	2	23	33	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	16	16	16	16	16	16	15	15	15	15	15	15
Grade (%)		2%			-4%			1%			1%	
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.99			1.00			0.96	
Flt Protected		1.00			1.00			0.97			0.99	
Satd. Flow (prot)		1865			2048			1902			1863	
Flt Permitted		0.94			0.99			0.76			0.90	
Satd. Flow (perm)		1756			2025			1497			1690	
Peak-hour factor, PHF	0.75	0.84	0.69	0.50	0.84	0.72	0.57	0.57	0.50	0.58	0.43	0.65
Adj. Flow (vph)	25	275	17	18	556	64	125	81	4	40	77	57
RTOR Reduction (vph)	0	3	0	0	5	0	0	1	0	0	23	0
Lane Group Flow (vph)	0	314	0	0	633	0	0	209	0	0	151	0
Confl. Peds. (#/hr)	1					1	4					4
Heavy Vehicles (%)	11%	14%	0%	0%	6%	2%	5%	7%	0%	10%	3%	3%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		26.0			26.0			13.3			13.3	
Effective Green, g (s)		26.0			26.0			13.3			13.3	
Actuated g/C Ratio		0.53			0.53			0.27			0.27	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Vehicle Extension (s)		6.0			6.0			3.0			3.0	
Lane Grp Cap (vph)		926			1067			403			455	
v/s Ratio Prot												
v/s Ratio Perm		0.18			c0.31			c0.14			0.09	
v/c Ratio		0.34			0.59			0.52			0.33	
Uniform Delay, d1		6.7			8.0			15.3			14.4	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.6			1.6			1.1			0.4	
Delay (s)		7.3			9.7			16.4			14.9	
Level of Service		A			A			B			B	
Approach Delay (s)		7.3			9.7			16.4			14.9	
Approach LOS		A			A			B			B	
Intersection Summary												
HCM 2000 Control Delay			10.8									
HCM 2000 Volume to Capacity ratio			0.57									
Actuated Cycle Length (s)			49.3									
Intersection Capacity Utilization			51.2%									
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

Design Year 2035 w/o Improvements AM

2: 5th Ave (SR 68)/5th Ave (SR 1005) & Main Street (SR 322)

12/16/2015



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱	↰	↱		↰	↱		↰	↱	
Volume (vph)	11	432	194	108	270	16	113	54	70	59	103	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	12	10	13	13	11	13	13	10	15	15
Grade (%)		2%			1%			4%			2%	
Total Lost time (s)		6.0	6.0	6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		1.00	0.97	1.00	1.00		1.00	0.98		1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00		1.00	1.00		0.99	1.00	
Frt		1.00	0.85	1.00	0.99		1.00	0.92		1.00	0.98	
Flt Protected		1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1377	1224	1255	1448		1365	1379		1323	1618	
Flt Permitted		0.99	1.00	0.95	1.00		0.45	1.00		0.67	1.00	
Satd. Flow (perm)		1363	1224	1255	1448		642	1379		934	1618	
Peak-hour factor, PHF	0.84	0.84	0.84	0.90	0.90	0.90	0.92	0.92	0.92	0.87	0.87	0.87
Adj. Flow (vph)	13	514	231	120	300	18	123	59	76	68	118	18
RTOR Reduction (vph)	0	0	0	0	2	0	0	0	0	0	7	0
Lane Group Flow (vph)	0	527	231	120	316	0	123	135	0	68	129	0
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Heavy Vehicles (%)	2%	2%	2%	7%	7%	7%	0%	0%	1%	0%	0%	0%
Parking (#/hr)	2	2	2	2	2	2	2	2	2	2	2	2
Turn Type	Perm	NA	pm+ov	Prot	NA		pm+pt	NA		Perm	NA	
Protected Phases		2	3	1	6		3	8			4	
Permitted Phases	2		2				8			4		
Actuated Green, G (s)		34.0	39.0	14.1	54.1		23.9	23.9		12.9	12.9	
Effective Green, g (s)		34.0	39.0	14.1	54.1		23.9	23.9		12.9	12.9	
Actuated g/C Ratio		0.38	0.43	0.16	0.60		0.27	0.27		0.14	0.14	
Clearance Time (s)		6.0	6.0	6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		514	612	196	870		210	366		133	231	
v/s Ratio Prot			0.02	c0.10	0.22		c0.03	0.10			0.08	
v/s Ratio Perm		c0.39	0.17				c0.12			0.07		
v/c Ratio		1.03	0.38	0.61	0.36		0.59	0.37		0.51	0.56	
Uniform Delay, d1		28.0	17.3	35.4	9.2		28.2	26.9		35.6	35.9	
Progression Factor		1.00	1.00	1.05	1.24		1.00	1.00		1.00	1.00	
Incremental Delay, d2		46.3	0.4	5.0	1.1		4.1	0.6		3.3	2.9	
Delay (s)		74.3	17.7	42.1	12.4		32.4	27.5		38.9	38.8	
Level of Service		E	B	D	B		C	C		D	D	
Approach Delay (s)		57.0			20.5			29.8			38.9	
Approach LOS		E			C			C			D	

Intersection Summary

HCM 2000 Control Delay	40.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	81.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

3: 6th Ave & Main Street (SR 322)

Design Year 2035 w/o Improvements AM

12/16/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	11	513	38	22	356	11	27	11	22	16	11	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	14	14	14	14	14	14	10	10	10	10	10	10
Grade (%)		1%			1%			1%			1%	
Total Lost time (s)		8.0			8.0			8.0			8.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			0.98			0.99	
Flpb, ped/bikes		1.00			1.00			0.99			0.99	
Frt		0.99			1.00			0.95			0.96	
Flt Protected		1.00			1.00			0.98			0.98	
Satd. Flow (prot)		1544			1496			1280			1301	
Flt Permitted		0.99			0.94			0.83			0.85	
Satd. Flow (perm)		1528			1413			1091			1122	
Peak-hour factor, PHF	0.78	0.78	0.78	0.81	0.81	0.81	0.52	0.52	0.52	0.85	0.85	0.85
Adj. Flow (vph)	14	658	49	27	440	14	52	21	42	19	13	13
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	721	0	0	481	0	0	115	0	0	45	0
Confl. Peds. (#/hr)	19		19	12		12	9		9	10		10
Heavy Vehicles (%)	3%	3%	3%	7%	7%	7%	0%	0%	0%	0%	0%	0%
Parking (#/hr)	2	2	2	2	2	2	2	2	2	2	2	2
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		61.9			61.9			12.1			12.1	
Effective Green, g (s)		61.9			61.9			12.1			12.1	
Actuated g/C Ratio		0.69			0.69			0.13			0.13	
Clearance Time (s)		8.0			8.0			8.0			8.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		1050			971			146			150	
v/s Ratio Prot												
v/s Ratio Perm		c0.47			0.34			c0.11			0.04	
v/c Ratio		0.69			0.50			0.79			0.30	
Uniform Delay, d1		8.3			6.7			37.7			35.1	
Progression Factor		0.56			1.28			1.00			1.00	
Incremental Delay, d2		2.2			1.7			23.9			1.1	
Delay (s)		6.8			10.2			61.6			36.3	
Level of Service		A			B			E			D	
Approach Delay (s)		6.8			10.2			61.6			36.3	
Approach LOS		A			B			E			D	
Intersection Summary												
HCM 2000 Control Delay			13.6			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.70									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			16.0			
Intersection Capacity Utilization			57.4%			ICU Level of Service			B			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

5: 8th Ave (SR 1007)/8th Ave & Main Street (SR 322)

Design Year 2035 w/o Improvements AM

12/16/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	11	356	119	70	281	11	178	32	119	27	27	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	11	12	12	10	10	10	13	13	13
Grade (%)		-2%			2%			-1%			2%	
Total Lost time (s)		8.0	8.0	8.0	8.0			8.0	8.0		8.0	
Lane Util. Factor		1.00	1.00	1.00	1.00			1.00	1.00		1.00	
Frpb, ped/bikes		1.00	0.85	1.00	1.00			1.00	0.95		0.99	
Flpb, ped/bikes		1.00	1.00	0.97	1.00			0.98	1.00		0.99	
Frt		1.00	0.85	1.00	0.99			1.00	0.85		0.98	
Flt Protected		1.00	1.00	0.95	1.00			0.96	1.00		0.98	
Satd. Flow (prot)		1671	1217	1415	1567			1506	1298		1643	
Flt Permitted		0.99	1.00	0.40	1.00			0.70	1.00		0.78	
Satd. Flow (perm)		1649	1217	595	1567			1093	1298		1316	
Peak-hour factor, PHF	0.71	0.71	0.71	0.87	0.87	0.87	0.92	0.92	0.92	0.72	0.72	0.72
Adj. Flow (vph)	15	501	168	80	323	13	193	35	129	38	38	15
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	516	168	80	336	0	0	228	129	0	91	0
Confl. Peds. (#/hr)	43		43	24		24	12		12	15		15
Heavy Vehicles (%)	3%	3%	3%	7%	7%	7%	0%	0%	0%	0%	0%	0%
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6			8		8	4		
Actuated Green, G (s)		50.5	50.5	50.5	50.5			23.5	23.5		23.5	
Effective Green, g (s)		50.5	50.5	50.5	50.5			23.5	23.5		23.5	
Actuated g/C Ratio		0.56	0.56	0.56	0.56			0.26	0.26		0.26	
Clearance Time (s)		8.0	8.0	8.0	8.0			8.0	8.0		8.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		925	682	333	879			285	338		343	
v/s Ratio Prot					0.21							
v/s Ratio Perm		c0.31	0.14	0.13				c0.21	0.10		0.07	
v/c Ratio		0.56	0.25	0.24	0.38			0.80	0.38		0.27	
Uniform Delay, d1		12.6	10.1	10.0	11.0			31.1	27.3		26.4	
Progression Factor		0.88	0.98	0.72	0.71			1.00	1.00		1.00	
Incremental Delay, d2		2.1	0.8	1.7	1.2			14.8	0.7		0.4	
Delay (s)		13.3	10.6	8.8	9.1			45.8	28.0		26.8	
Level of Service		B	B	A	A			D	C		C	
Approach Delay (s)		12.6			9.0			39.4			26.8	
Approach LOS		B			A			D			C	
Intersection Summary												
HCM 2000 Control Delay			18.7			HCM 2000 Level of Service			B			
HCM 2000 Volume to Capacity ratio			0.63									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			16.0			
Intersection Capacity Utilization			78.2%			ICU Level of Service			D			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

6: 9th Ave & Main Street (SR 322)

Design Year 2035 w/o Improvements AM

12/16/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	59	421	22	0	351	27	11	16	11	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	9	10	10	12	12	12	15	15	15	12	12	12
Grade (%)		-2%			2%			-3%			0%	
Total Lost time (s)	8.0	8.0			8.0			8.0	8.0			
Lane Util. Factor	1.00	1.00			1.00			1.00	1.00			
Frpb, ped/bikes	1.00	1.00			1.00			1.00	0.77			
Flpb, ped/bikes	0.99	1.00			1.00			0.91	1.00			
Frt	1.00	0.99			0.99			1.00	0.85			
Flt Protected	0.95	1.00			1.00			0.98	1.00			
Satd. Flow (prot)	1420	1551			1562			1701	1245			
Flt Permitted	0.53	1.00			1.00			0.98	1.00			
Satd. Flow (perm)	792	1551			1562			1701	1245			
Peak-hour factor, PHF	0.81	0.81	0.81	0.96	0.96	0.96	0.75	0.75	0.75	0.90	0.90	0.90
Adj. Flow (vph)	73	520	27	0	366	28	15	21	15	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	14	0	0	0
Lane Group Flow (vph)	73	547	0	0	394	0	0	36	1	0	0	0
Confl. Peds. (#/hr)	6		6	10		10	82		82	4		4
Heavy Vehicles (%)	3%	3%	3%	7%	7%	7%	0%	0%	0%	0%	0%	0%
Turn Type	Perm	NA			NA		Perm	NA	Perm			
Protected Phases		2			6			8				
Permitted Phases	2						8		8			
Actuated Green, G (s)	65.7	65.7			65.7			8.3	8.3			
Effective Green, g (s)	65.7	65.7			65.7			8.3	8.3			
Actuated g/C Ratio	0.73	0.73			0.73			0.09	0.09			
Clearance Time (s)	8.0	8.0			8.0			8.0	8.0			
Vehicle Extension (s)	3.0	3.0			3.0			3.0	3.0			
Lane Grp Cap (vph)	578	1132			1140			156	114			
v/s Ratio Prot		0.35			0.25							
v/s Ratio Perm	0.09							0.02	0.00			
v/c Ratio	0.13	0.48			0.35			0.23	0.01			
Uniform Delay, d1	3.6	5.1			4.4			37.9	37.1			
Progression Factor	0.75	0.62			1.00			1.00	1.00			
Incremental Delay, d2	0.4	1.3			0.8			0.8	0.0			
Delay (s)	3.1	4.5			5.2			38.6	37.2			
Level of Service	A	A			A			D	D			
Approach Delay (s)		4.3			5.2			38.2			0.0	
Approach LOS		A			A			D			A	
Intersection Summary												
HCM 2000 Control Delay			6.3				HCM 2000 Level of Service		A			
HCM 2000 Volume to Capacity ratio			0.45									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)		16.0			
Intersection Capacity Utilization			59.8%				ICU Level of Service		B			
Analysis Period (min)			15									
c Critical Lane Group												

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	32	486	32	41	389	40	0	0	0	0	0	0
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, %	-	1	-	-	1	-	-	1	-	-	1	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	7	7	7	0	0	0	0	0	0
Mvmt Flow	36	540	36	46	432	44	0	0	0	0	0	0
Major/Minor	Major1			Major2			Minor1					
Conflicting Flow All	477	0	0	576	0	0	1175	1197	558			
Stage 1	-	-	-	-	-	-	629	629	-			
Stage 2	-	-	-	-	-	-	546	568	-			
Critical Hdwy	4.13	-	-	4.17	-	-	6.6	6.7	6.3			
Critical Hdwy Stg 1	-	-	-	-	-	-	5.6	5.7	-			
Critical Hdwy Stg 2	-	-	-	-	-	-	5.6	5.7	-			
Follow-up Hdwy	2.227	-	-	2.263	-	-	3.5	4	3.3			
Pot Cap-1 Maneuver	1080	-	-	973	-	-	200	175	525			
Stage 1	-	-	-	-	-	-	517	462	-			
Stage 2	-	-	-	-	-	-	567	494	-			
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1080	-	-	973	-	-	178	0	525			
Mov Cap-2 Maneuver	-	-	-	-	-	-	178	0	-			
Stage 1	-	-	-	-	-	-	492	0	-			
Stage 2	-	-	-	-	-	-	530	0	-			
Approach	EB			WB			NB					
HCM Control Delay, s	0.5			0.8			0					
HCM LOS							A					
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR					
Capacity (veh/h)	-	1080	-	-	973	-	-					
HCM Lane V/C Ratio	-	0.033	-	-	0.047	-	-					
HCM Control Delay (s)	0	8.4	0	-	8.9	0	-					
HCM Lane LOS	A	A	A	-	A	A	-					
HCM 95th %tile Q(veh)	-	0.1	-	-	0.1	-	-					

HCM 2010 Signalized Intersection Summary
1: Second Avenue & Main Street (SR 322)

Design Year 2035 w/o Improvements Midday

12/16/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	36	244	8	2	386	29	17	19	3	27	4	35
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		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
Adj Sat Flow, veh/h/ln	1956	1836	1956	2016	1885	2016	1966	1966	1966	1966	1966	1966
Adj Flow Rate, veh/h	43	260	14	4	424	39	25	21	8	39	8	48
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.83	0.94	0.58	0.50	0.91	0.75	0.67	0.90	0.38	0.69	0.50	0.73
Percent Heavy Veh, %	8	8	8	7	7	7	0	0	0	0	0	0
Cap, veh/h	184	968	49	91	1102	101	196	91	27	186	25	87
Arrive On Green	0.65	0.65	0.65	0.65	0.65	0.65	0.10	0.10	0.10	0.10	0.10	0.10
Sat Flow, veh/h	128	1491	75	3	1697	155	636	873	262	584	234	836
Grp Volume(v), veh/h	317	0	0	467	0	0	54	0	0	95	0	0
Grp Sat Flow(s),veh/h/ln	1693	0	0	1855	0	0	1772	0	0	1654	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0
Cycle Q Clear(g_c), s	3.0	0.0	0.0	4.8	0.0	0.0	1.1	0.0	0.0	2.1	0.0	0.0
Prop In Lane	0.14		0.04	0.01		0.08	0.46		0.15	0.41		0.51
Lane Grp Cap(c), veh/h	1200	0	0	1294	0	0	315	0	0	298	0	0
V/C Ratio(X)	0.26	0.00	0.00	0.36	0.00	0.00	0.17	0.00	0.00	0.32	0.00	0.00
Avail Cap(c_a), veh/h	1975	0	0	2186	0	0	1106	0	0	1070	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	3.0	0.0	0.0	3.3	0.0	0.0	16.7	0.0	0.0	17.2	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.0	0.0	0.6	0.0	0.0	0.3	0.0	0.0	0.6	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	1.6	0.0	0.0	2.6	0.0	0.0	0.6	0.0	0.0	1.1	0.0	0.0
LnGrp Delay(d),s/veh	3.5	0.0	0.0	4.0	0.0	0.0	17.0	0.0	0.0	17.8	0.0	0.0
LnGrp LOS	A			A			B			B		
Approach Vol, veh/h		317			467			54			95	
Approach Delay, s/veh		3.5			4.0			17.0			17.8	
Approach LOS		A			A			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		31.4		9.3		31.4		9.3				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		46.0		24.0		46.0		24.0				
Max Q Clear Time (g_c+l1), s		5.0		4.1		6.8		3.1				
Green Ext Time (p_c), s		20.1		0.5		19.6		0.5				
Intersection Summary												
HCM 2010 Ctrl Delay			5.9									
HCM 2010 LOS			A									

HCM 2010 Signalized Intersection Summary Design Year 2035 w/o Improvements Midday
 2: 5th Ave (SR 68)/5th Ave (SR 1005) & Main Street (SR 322) 12/16/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	11	318	162	164	339	25	113	76	144	40	194	27
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.96	1.00		0.98	0.98		0.96	0.96		0.94
Parking Bus, Adj	1.00	1.00	0.89	1.00	1.00	0.89	1.00	1.00	0.89	1.00	1.00	0.89
Adj Sat Flow, veh/h/ln	1693	1676	1676	1685	1752	1770	1676	1743	1743	1693	1761	1761
Adj Flow Rate, veh/h	12	346	176	189	390	29	116	78	148	45	218	30
Adj No. of Lanes	0	1	1	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.87	0.87	0.87	0.97	0.97	0.97	0.89	0.89	0.89
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	0	0	0
Cap, veh/h	50	521	463	208	742	55	235	159	302	293	282	39
Arrive On Green	0.32	0.32	0.32	0.26	1.00	1.00	0.06	0.34	0.34	0.21	0.21	0.21
Sat Flow, veh/h	20	1636	1218	1604	1431	106	1596	468	887	1000	1337	184
Grp Volume(v), veh/h	358	0	176	189	0	419	116	0	226	45	0	248
Grp Sat Flow(s),veh/h/ln	1656	0	1218	1604	0	1537	1596	0	1355	1000	0	1521
Q Serve(g_s), s	0.0	0.0	8.9	9.7	0.0	0.0	4.7	0.0	11.2	3.2	0.0	13.1
Cycle Q Clear(g_c), s	15.7	0.0	8.9	9.7	0.0	0.0	4.7	0.0	11.2	3.4	0.0	13.1
Prop In Lane	0.03		1.00	1.00		0.07	1.00		0.65	1.00		0.12
Lane Grp Cap(c), veh/h	572	0	463	208	0	798	235	0	461	293	0	320
V/C Ratio(X)	0.63	0.00	0.38	0.91	0.00	0.53	0.49	0.00	0.49	0.15	0.00	0.77
Avail Cap(c_a), veh/h	572	0	463	208	0	798	235	0	494	317	0	358
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.98	0.00	0.98	0.77	0.00	0.77	0.88	0.00	0.88	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.1	0.0	19.2	31.0	0.0	0.0	24.4	0.0	22.2	27.9	0.0	31.6
Incr Delay (d2), s/veh	5.0	0.0	2.3	32.2	0.0	1.9	1.4	0.0	0.7	0.2	0.0	9.2
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	8.1	0.0	3.3	6.1	0.0	0.4	2.1	0.0	4.3	0.9	0.0	6.3
LnGrp Delay(d),s/veh	30.1	0.0	21.6	63.2	0.0	1.9	25.8	0.0	22.9	28.2	0.0	40.8
LnGrp LOS	C		C	E		A	C		C	C		D
Approach Vol, veh/h		534			608			342			293	
Approach Delay, s/veh		27.3			21.0			23.9			38.9	
Approach LOS		C			C			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4		6		8				
Phs Duration (G+Y+Rc), s	17.0	33.1	11.0	23.9		50.1		34.9				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0		6.0		6.0				
Max Green Setting (Gmax), s	11.0	25.0	5.0	20.0		42.0		31.0				
Max Q Clear Time (g_c+l1), s	11.7	17.7	6.7	15.1		2.0		13.2				
Green Ext Time (p_c), s	0.0	2.6	0.0	1.1		4.6		2.2				
Intersection Summary												
HCM 2010 Ctrl Delay			26.4									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
3: 6th Ave & Main Street (SR 322)

Design Year 2035 w/o Improvements Midday

12/16/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	23	448	30	16	462	26	24	12	38	41	15	42
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	0.96		0.93	0.91		0.89	0.92		0.87
Parking Bus, Adj	1.00	1.00	0.89	1.00	1.00	0.89	1.00	1.00	0.89	1.00	1.00	0.89
Adj Sat Flow, veh/h/ln	1770	1752	1770	1770	1752	1770	1701	1701	1701	1701	1701	1701
Adj Flow Rate, veh/h	25	487	33	18	531	30	31	16	49	54	20	55
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.87	0.87	0.87	0.77	0.77	0.77	0.76	0.76	0.76
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	0	0	0
Cap, veh/h	66	877	58	56	906	50	106	56	110	129	50	88
Arrive On Green	1.00	1.00	1.00	0.64	0.64	0.64	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	33	1371	90	20	1416	78	293	323	641	401	289	513
Grp Volume(v), veh/h	545	0	0	579	0	0	96	0	0	129	0	0
Grp Sat Flow(s),veh/h/ln	1495	0	0	1515	0	0	1257	0	0	1203	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	18.5	0.0	0.0	5.4	0.0	0.0	7.8	0.0	0.0
Prop In Lane	0.05		0.06	0.03		0.05	0.32		0.51	0.42		0.43
Lane Grp Cap(c), veh/h	1000	0	0	1012	0	0	272	0	0	267	0	0
V/C Ratio(X)	0.54	0.00	0.00	0.57	0.00	0.00	0.35	0.00	0.00	0.48	0.00	0.00
Avail Cap(c_a), veh/h	1000	0	0	1012	0	0	357	0	0	350	0	0
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)	0.46	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	8.9	0.0	0.0	31.4	0.0	0.0	32.2	0.0	0.0
Incr Delay (d2), s/veh	1.0	0.0	0.0	2.3	0.0	0.0	0.8	0.0	0.0	1.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.0	8.4	0.0	0.0	2.1	0.0	0.0	2.9	0.0	0.0
LnGrp Delay(d),s/veh	1.0	0.0	0.0	11.2	0.0	0.0	32.2	0.0	0.0	33.6	0.0	0.0
LnGrp LOS	A			B			C			C		
Approach Vol, veh/h		545			579			96			129	
Approach Delay, s/veh		1.0			11.2			32.2			33.6	
Approach LOS		A			B			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		62.4		22.6		62.4		22.6				
Change Period (Y+Rc), s		8.0		8.0		8.0		8.0				
Max Green Setting (Gmax), s		48.0		21.0		48.0		21.0				
Max Q Clear Time (g_c+l1), s		2.0		9.8		20.5		7.4				
Green Ext Time (p_c), s		6.5		0.7		6.1		0.8				
Intersection Summary												
HCM 2010 Ctrl Delay				10.7								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary Design Year 2035 w/o Improvements Midday
5: 8th Ave (SR 1007)/8th Ave & Main Street (SR 322) 12/16/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	5	332	107	68	370	5	190	30	104	32	22	11
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.99	0.99		0.99	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1727	1710	1710	1693	1693	1693	1719	1702	1702	1761	1761	1761
Adj Flow Rate, veh/h	6	400	129	75	407	5	211	33	116	41	28	14
Adj No. of Lanes	0	1	1	1	1	0	0	1	1	0	1	0
Peak Hour Factor	0.83	0.83	0.83	0.91	0.91	0.91	0.90	0.90	0.90	0.79	0.79	0.79
Percent Heavy Veh, %	1	1	1	0	0	0	1	1	1	0	0	0
Cap, veh/h	46	842	712	472	828	10	340	41	451	108	65	22
Arrive On Green	0.99	0.99	0.99	0.99	0.99	0.99	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	6	1698	1436	787	1668	20	827	129	1428	141	204	70
Grp Volume(v), veh/h	406	0	129	75	0	412	244	0	116	83	0	0
Grp Sat Flow(s),veh/h/ln	1704	0	1436	787	0	1689	956	0	1428	415	0	0
Q Serve(g_s), s	0.0	0.0	0.1	0.1	0.0	0.3	0.0	0.0	5.1	2.4	0.0	0.0
Cycle Q Clear(g_c), s	0.3	0.0	0.1	0.5	0.0	0.3	21.2	0.0	5.1	23.7	0.0	0.0
Prop In Lane	0.01		1.00	1.00		0.01	0.86		1.00	0.49		0.17
Lane Grp Cap(c), veh/h	888	0	712	472	0	838	381	0	451	194	0	0
V/C Ratio(X)	0.46	0.00	0.18	0.16	0.00	0.49	0.64	0.00	0.26	0.43	0.00	0.00
Avail Cap(c_a), veh/h	888	0	712	472	0	838	474	0	554	294	0	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.93	0.00	0.93	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.2	0.0	0.2	0.2	0.0	0.2	27.2	0.0	21.7	27.6	0.0	0.0
Incr Delay (d2), s/veh	1.7	0.0	0.6	0.7	0.0	1.9	2.0	0.0	0.3	1.5	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	0.5	0.0	0.1	0.1	0.0	0.5	5.6	0.0	2.1	1.9	0.0	0.0
LnGrp Delay(d),s/veh	1.9	0.0	0.7	0.8	0.0	2.1	29.2	0.0	22.0	29.1	0.0	0.0
LnGrp LOS	A		A	A		A	C		C	C		
Approach Vol, veh/h		535			487			360			83	
Approach Delay, s/veh		1.6			1.9			26.8			29.1	
Approach LOS		A			A			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		50.2		34.8		50.2		34.8				
Change Period (Y+Rc), s		8.0		8.0		8.0		8.0				
Max Green Setting (Gmax), s		36.0		33.0		36.0		33.0				
Max Q Clear Time (g_c+l1), s		2.3		25.7		2.5		23.2				
Green Ext Time (p_c), s		5.4		1.2		5.4		1.4				
Intersection Summary												
HCM 2010 Ctrl Delay			9.5									
HCM 2010 LOS			A									

HCM 2010 Signalized Intersection Summary
6: 9th Ave & Main Street (SR 322)

Design Year 2035 w/o Improvements Midday

12/16/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	14	437	16	0	438	36	5	11	12	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	0.99		0.97	1.00		0.91	1.00		0.52			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1642	1710	1727	0	1676	1693	1805	1805	1805			
Adj Flow Rate, veh/h	16	491	18	0	461	38	7	15	17			
Adj No. of Lanes	1	1	0	0	1	0	0	1	1			
Peak Hour Factor	0.89	0.89	0.89	0.95	0.95	0.95	0.72	0.72	0.72			
Percent Heavy Veh, %	1	1	1	0	1	1	0	0	0			
Cap, veh/h	502	1106	41	0	1024	84	77	165	109			
Arrive On Green	1.00	1.00	1.00	0.00	0.68	0.68	0.14	0.14	0.14			
Sat Flow, veh/h	781	1638	60	0	1515	125	565	1211	802			
Grp Volume(v), veh/h	16	0	509	0	0	499	22	0	17			
Grp Sat Flow(s),veh/h/ln	781	0	1698	0	0	1640	1777	0	802			
Q Serve(g_s), s	0.4	0.0	0.0	0.0	0.0	12.1	0.9	0.0	1.6			
Cycle Q Clear(g_c), s	12.4	0.0	0.0	0.0	0.0	12.1	0.9	0.0	1.6			
Prop In Lane	1.00		0.04	0.00		0.08	0.32		1.00			
Lane Grp Cap(c), veh/h	502	0	1147	0	0	1108	242	0	109			
V/C Ratio(X)	0.03	0.00	0.44	0.00	0.00	0.45	0.09	0.00	0.16			
Avail Cap(c_a), veh/h	502	0	1147	0	0	1108	355	0	160			
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.91	0.00	0.91	0.00	0.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	1.3	0.0	0.0	0.0	0.0	6.4	32.1	0.0	32.4			
Incr Delay (d2), s/veh	0.1	0.0	1.1	0.0	0.0	1.3	0.2	0.0	0.7			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.4	0.0	0.0	5.8	0.5	0.0	0.4			
LnGrp Delay(d),s/veh	1.4	0.0	1.1	0.0	0.0	7.8	32.3	0.0	33.1			
LnGrp LOS	A		A			A	C		C			
Approach Vol, veh/h		525			499			39				
Approach Delay, s/veh		1.1			7.8			32.6				
Approach LOS		A			A			C				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		65.4				65.4		19.6				
Change Period (Y+Rc), s		8.0				8.0		8.0				
Max Green Setting (Gmax), s		52.0				52.0		17.0				
Max Q Clear Time (g_c+I1), s		14.4				14.1		3.6				
Green Ext Time (p_c), s		5.4				5.4		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay			5.4									
HCM 2010 LOS			A									

HCM 2010 Signalized Intersection Summary
7: 5th Ave (SR 68) & South Street

Design Year 2035 w/o Improvements Midday

12/16/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	5	27	22	141	35	21	32	338	37	4	327	3
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	0.99		0.99	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
Adj Sat Flow, veh/h/ln	1919	1844	1919	1881	1837	1881	1881	1795	1881	1948	1878	1948
Adj Flow Rate, veh/h	8	39	35	176	44	36	47	356	44	12	344	8
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.63	0.69	0.63	0.80	0.80	0.59	0.68	0.95	0.85	0.33	0.95	0.38
Percent Heavy Veh, %	0	0	0	6	6	6	0	5	5	0	3	3
Cap, veh/h	112	220	175	374	80	50	368	741	92	479	538	13
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.03	0.47	0.47	0.29	0.29	0.29
Sat Flow, veh/h	61	907	721	923	328	205	1791	1567	194	1023	1828	43
Grp Volume(v), veh/h	82	0	0	256	0	0	47	0	400	12	0	352
Grp Sat Flow(s),veh/h/ln	1689	0	0	1456	0	0	1791	0	1761	1023	0	1871
Q Serve(g_s), s	0.0	0.0	0.0	4.8	0.0	0.0	0.7	0.0	6.3	0.3	0.0	6.6
Cycle Q Clear(g_c), s	1.5	0.0	0.0	6.4	0.0	0.0	0.7	0.0	6.3	0.3	0.0	6.6
Prop In Lane	0.10		0.43	0.69		0.14	1.00		0.11	1.00		0.02
Lane Grp Cap(c), veh/h	508	0	0	504	0	0	368	0	833	479	0	551
V/C Ratio(X)	0.16	0.00	0.00	0.51	0.00	0.00	0.13	0.00	0.48	0.03	0.00	0.64
Avail Cap(c_a), veh/h	1328	0	0	1200	0	0	756	0	2654	1316	0	2080
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.2	0.0	0.0	13.9	0.0	0.0	9.1	0.0	7.3	10.2	0.0	12.4
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.8	0.0	0.0	0.2	0.0	0.4	0.0	0.0	1.2
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	0.7	0.0	0.0	2.7	0.0	0.0	0.3	0.0	3.1	0.1	0.0	3.5
LnGrp Delay(d),s/veh	12.3	0.0	0.0	14.7	0.0	0.0	9.3	0.0	7.7	10.2	0.0	13.7
LnGrp LOS	B			B			A		A	B		B
Approach Vol, veh/h		82			256			447			364	
Approach Delay, s/veh		12.3			14.7			7.9			13.5	
Approach LOS		B			B			A			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		25.1		15.3	7.2	17.9		15.3				
Change Period (Y+Rc), s		6.0		5.5	6.0	6.0		5.5				
Max Green Setting (Gmax), s		61.0		30.0	10.0	45.0		30.0				
Max Q Clear Time (g_c+I1), s		8.3		3.5	2.7	8.6		8.4				
Green Ext Time (p_c), s		3.3		1.3	0.0	3.2		1.3				
Intersection Summary												
HCM 2010 Ctrl Delay				11.5								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
8: Route 68 & Clarion Mall Drive/Kane Drive

Design Year 2035 w/o Improvements Midday

12/16/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	95	10	84	10	12	16	63	380	19	49	363	35
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1996	1963	1919	1996	1900	1996	1791	1829	1881	1919	1863	1919
Adj Flow Rate, veh/h	100	20	0	20	24	24	80	396	24	72	412	0
Adj No. of Lanes	0	1	1	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.50	0.88	0.50	0.50	0.67	0.79	0.96	0.79	0.68	0.88	0.88
Percent Heavy Veh, %	0	0	4	0	0	0	5	3	3	0	3	3
Cap, veh/h	190	26	222	76	76	59	719	1372	83	767	1314	0
Arrive On Green	0.09	0.09	0.00	0.09	0.09	0.09	0.04	0.80	0.80	0.71	0.71	0.00
Sat Flow, veh/h	1368	274	1631	346	807	629	1706	1708	103	992	1863	0
Grp Volume(v), veh/h	120	0	0	68	0	0	80	0	420	72	412	0
Grp Sat Flow(s),veh/h/ln	1642	0	1631	1781	0	0	1706	0	1811	992	1863	0
Q Serve(g_s), s	3.6	0.0	0.0	0.0	0.0	0.0	1.2	0.0	6.3	2.5	9.0	0.0
Cycle Q Clear(g_c), s	7.4	0.0	0.0	3.8	0.0	0.0	1.2	0.0	6.3	2.5	9.0	0.0
Prop In Lane	0.83		1.00	0.29		0.35	1.00		0.06	1.00		0.00
Lane Grp Cap(c), veh/h	216	0	222	210	0	0	719	0	1455	767	1314	0
V/C Ratio(X)	0.56	0.00	0.00	0.32	0.00	0.00	0.11	0.00	0.29	0.09	0.31	0.00
Avail Cap(c_a), veh/h	494	0	526	515	0	0	1285	0	1455	767	1314	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.97	0.00	0.97	1.00	1.00	0.00
Uniform Delay (d), s/veh	47.1	0.0	0.0	45.7	0.0	0.0	3.7	0.0	2.7	5.0	6.0	0.0
Incr Delay (d2), s/veh	2.2	0.0	0.0	0.9	0.0	0.0	0.1	0.0	0.5	0.2	0.6	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	3.6	0.0	0.0	1.9	0.0	0.0	0.6	0.0	3.3	0.7	4.8	0.0
LnGrp Delay(d),s/veh	49.3	0.0	0.0	46.6	0.0	0.0	3.8	0.0	3.2	5.3	6.6	0.0
LnGrp LOS	D			D			A		A	A	A	
Approach Vol, veh/h		120			68			500			484	
Approach Delay, s/veh		49.3			46.6			3.3			6.4	
Approach LOS		D			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		92.0		15.0	10.5	81.4		15.0				
Change Period (Y+Rc), s		6.0		5.0	6.0	6.0		5.0				
Max Green Setting (Gmax), s		66.0		30.0	40.0	20.0		30.0				
Max Q Clear Time (g_c+l1), s		8.3		9.4	3.2	11.0		5.8				
Green Ext Time (p_c), s		31.8		0.7	0.3	7.5		0.7				
Intersection Summary												
HCM 2010 Ctrl Delay			11.8									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary
9: Route 68 & Perkins Drive/Commerical Drive

Design Year 2035 w/o Improvements Midday

12/16/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	175	30	200	33	38	5	198	204	13	31	193	146
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1919	1903	1881	1900	1876	1900	1844	1831	1881	1863	1810	1900
Adj Flow Rate, veh/h	208	40	244	48	52	12	233	237	24	48	224	164
Adj No. of Lanes	0	1	1	0	1	0	1	1	0	1	1	1
Peak Hour Factor	0.84	0.75	0.82	0.69	0.73	0.42	0.85	0.86	0.54	0.65	0.86	0.89
Percent Heavy Veh, %	0	0	2	0	0	0	2	3	3	3	6	1
Cap, veh/h	263	39	670	46	39	5	267	892	90	63	776	692
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.15	0.55	0.55	0.04	0.43	0.43
Sat Flow, veh/h	760	146	1596	0	146	18	1756	1636	166	1774	1810	1615
Grp Volume(v), veh/h	248	0	244	112	0	0	233	0	261	48	224	164
Grp Sat Flow(s),veh/h/ln	906	0	1596	164	0	0	1756	0	1802	1774	1810	1615
Q Serve(g_s), s	0.0	0.0	11.7	0.0	0.0	0.0	14.5	0.0	8.6	3.0	9.0	7.2
Cycle Q Clear(g_c), s	30.0	0.0	11.7	30.0	0.0	0.0	14.5	0.0	8.6	3.0	9.0	7.2
Prop In Lane	0.84		1.00	0.43		0.11	1.00		0.09	1.00		1.00
Lane Grp Cap(c), veh/h	302	0	670	90	0	0	267	0	982	63	776	692
V/C Ratio(X)	0.82	0.00	0.36	1.25	0.00	0.00	0.87	0.00	0.27	0.77	0.29	0.24
Avail Cap(c_a), veh/h	302	0	670	90	0	0	392	0	982	396	776	692
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	0.00	1.00	0.00	1.00	0.94	0.94	0.94
Uniform Delay (d), s/veh	41.3	0.0	22.3	42.0	0.0	0.0	46.5	0.0	13.6	53.6	20.9	20.4
Incr Delay (d2), s/veh	16.5	0.0	0.3	175.8	0.0	0.0	13.7	0.0	0.7	16.6	0.9	0.8
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	9.0	0.0	5.2	7.1	0.0	0.0	8.1	0.0	4.5	1.8	4.7	3.4
LnGrp Delay(d),s/veh	57.8	0.0	22.6	217.8	0.0	0.0	60.2	0.0	14.2	70.2	21.8	21.1
LnGrp LOS	E		C	F			E		B	E	C	C
Approach Vol, veh/h		492			112			494			436	
Approach Delay, s/veh		40.3			217.8			35.9			26.8	
Approach LOS		D			F			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	67.0		35.0	23.0	54.0		35.0				
Change Period (Y+Rc), s	6.0	6.0		5.0	6.0	6.0		5.0				
Max Green Setting (Gmax), s	25.0	40.0		30.0	25.0	40.0		30.0				
Max Q Clear Time (g_c+I1), s	5.0	10.6		32.0	16.5	11.0		32.0				
Green Ext Time (p_c), s	0.1	8.9		0.0	0.5	8.9		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			48.0									
HCM 2010 LOS			D									

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	41	444	42	33	504	33	0	0	0	0	0	0
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, %	-	1	-	-	1	-	-	1	-	-	1	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	1	1	1	1	1	1	0	0	0	0	0	0
Mvmt Flow	46	493	47	37	560	37	0	0	0	0	0	0
Major/Minor	Major1			Major2			Minor1					
Conflicting Flow All	597	0	0	540	0	0	1260	1278	517			
Stage 1	-	-	-	-	-	-	608	608	-			
Stage 2	-	-	-	-	-	-	652	670	-			
Critical Hdwy	4.11	-	-	4.11	-	-	6.6	6.7	6.3			
Critical Hdwy Stg 1	-	-	-	-	-	-	5.6	5.7	-			
Critical Hdwy Stg 2	-	-	-	-	-	-	5.6	5.7	-			
Follow-up Hdwy	2.209	-	-	2.209	-	-	3.5	4	3.3			
Pot Cap-1 Maneuver	985	-	-	1034	-	-	177	156	554			
Stage 1	-	-	-	-	-	-	529	473	-			
Stage 2	-	-	-	-	-	-	504	442	-			
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	985	-	-	1034	-	-	156	0	554			
Mov Cap-2 Maneuver	-	-	-	-	-	-	156	0	-			
Stage 1	-	-	-	-	-	-	494	0	-			
Stage 2	-	-	-	-	-	-	477	0	-			
Approach	EB			WB			NB					
HCM Control Delay, s	0.7			0.5			0					
HCM LOS							A					
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR					
Capacity (veh/h)	-	985	-	-	1034	-	-					
HCM Lane V/C Ratio	-	0.046	-	-	0.035	-	-					
HCM Control Delay (s)	0	8.8	0	-	8.6	0	-					
HCM Lane LOS	A	A	A	-	A	A	-					
HCM 95th %tile Q(veh)	-	0.1	-	-	0.1	-	-					

HCM 2010 Signalized Intersection Summary
1: Second Avenue & Main Street (SR 322)

Design Year 2035 w/o Improvements PM

12/16/2015

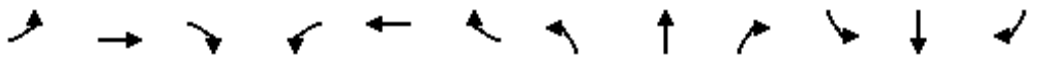
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	39	369	15	9	411	46	17	26	1	67	18	39
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.99		0.98	0.98		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1956	1895	1956	2016	1917	2016	1966	1966	1966	1966	1945	1966
Adj Flow Rate, veh/h	65	429	21	13	484	69	25	35	4	78	25	57
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.60	0.86	0.70	0.67	0.85	0.67	0.67	0.75	0.25	0.86	0.71	0.69
Percent Heavy Veh, %	3	3	3	6	6	6	0	0	0	0	0	0
Cap, veh/h	163	1002	46	76	1071	150	165	195	18	199	61	90
Arrive On Green	0.66	0.66	0.66	0.66	0.66	0.66	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	135	1516	70	14	1621	227	469	1235	114	643	384	568
Grp Volume(v), veh/h	515	0	0	566	0	0	64	0	0	160	0	0
Grp Sat Flow(s),veh/h/ln	1721	0	0	1862	0	0	1818	0	0	1595	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	0.0	0.0
Cycle Q Clear(g_c), s	7.0	0.0	0.0	8.1	0.0	0.0	1.6	0.0	0.0	5.0	0.0	0.0
Prop In Lane	0.13		0.04	0.02		0.12	0.39		0.06	0.49		0.36
Lane Grp Cap(c), veh/h	1211	0	0	1297	0	0	378	0	0	349	0	0
V/C Ratio(X)	0.43	0.00	0.00	0.44	0.00	0.00	0.17	0.00	0.00	0.46	0.00	0.00
Avail Cap(c_a), veh/h	1527	0	0	1651	0	0	810	0	0	750	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	4.4	0.0	0.0	4.5	0.0	0.0	20.2	0.0	0.0	21.6	0.0	0.0
Incr Delay (d2), s/veh	0.9	0.0	0.0	0.8	0.0	0.0	0.2	0.0	0.0	0.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	0.0	0.0	4.4	0.0	0.0	0.9	0.0	0.0	2.4	0.0	0.0
LnGrp Delay(d),s/veh	5.2	0.0	0.0	5.4	0.0	0.0	20.4	0.0	0.0	22.5	0.0	0.0
LnGrp LOS	A			A			C			C		
Approach Vol, veh/h		515			566			64			160	
Approach Delay, s/veh		5.2			5.4			20.4			22.5	
Approach LOS		A			A			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		41.4		13.7		41.4		13.7				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		47.0		23.0		47.0		23.0				
Max Q Clear Time (g_c+l1), s		9.0		7.0		10.1		3.6				
Green Ext Time (p_c), s		26.8		0.8		26.3		0.8				
Intersection Summary												
HCM 2010 Ctrl Delay			8.2									
HCM 2010 LOS			A									

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	22	367	167	130	365	22	167	124	124	46	200	27
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	0.99		0.99
Parking Bus, Adj	1.00	1.00	0.89	1.00	1.00	0.89	1.00	1.00	0.89	1.00	1.00	0.89
Adj Sat Flow, veh/h/ln	1693	1660	1660	1668	1735	1770	1676	1734	1743	1693	1761	1761
Adj Flow Rate, veh/h	23	390	178	157	440	27	182	135	135	53	230	31
Adj No. of Lanes	0	1	1	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.94	0.94	0.94	0.83	0.83	0.83	0.92	0.92	0.92	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	0	0	0	0	0	0
Cap, veh/h	57	563	541	186	777	48	224	235	235	251	262	35
Arrive On Green	0.36	0.36	0.36	0.12	0.54	0.54	0.07	0.33	0.33	0.19	0.19	0.19
Sat Flow, veh/h	45	1568	1247	1589	1440	88	1596	706	706	996	1350	182
Grp Volume(v), veh/h	413	0	178	157	0	467	182	0	270	53	0	261
Grp Sat Flow(s),veh/h/ln	1613	0	1247	1589	0	1528	1596	0	1412	996	0	1532
Q Serve(g_s), s	4.0	0.0	8.9	9.1	0.0	19.0	7.0	0.0	14.8	4.4	0.0	15.6
Cycle Q Clear(g_c), s	20.2	0.0	8.9	9.1	0.0	19.0	7.0	0.0	14.8	6.2	0.0	15.6
Prop In Lane	0.06		1.00	1.00		0.06	1.00		0.50	1.00		0.12
Lane Grp Cap(c), veh/h	619	0	541	186	0	825	224	0	470	251	0	298
V/C Ratio(X)	0.67	0.00	0.33	0.84	0.00	0.57	0.81	0.00	0.57	0.21	0.00	0.88
Avail Cap(c_a), veh/h	619	0	541	220	0	825	224	0	470	269	0	326
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)	0.90	0.00	0.90	0.69	0.00	0.69	0.54	0.00	0.54	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.7	0.0	17.6	40.7	0.0	14.3	31.3	0.0	25.9	33.8	0.0	36.8
Incr Delay (d2), s/veh	5.0	0.0	1.5	16.1	0.0	1.9	11.7	0.0	0.9	0.4	0.0	21.4
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	10.0	0.0	3.2	4.8	0.0	8.4	2.4	0.0	5.9	1.2	0.0	8.4
LnGrp Delay(d),s/veh	30.8	0.0	19.1	56.8	0.0	16.3	43.0	0.0	26.8	34.2	0.0	58.2
LnGrp LOS	C		B	E		B	D		C	C		E
Approach Vol, veh/h		591			624			452			314	
Approach Delay, s/veh		27.3			26.5			33.3			54.2	
Approach LOS		C			C			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4		6		8				
Phs Duration (G+Y+Rc), s	17.0	39.7	13.0	24.3		56.7		37.3				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0		6.0		6.0				
Max Green Setting (Gmax), s	13.0	30.0	7.0	20.0		49.0		31.0				
Max Q Clear Time (g_c+l1), s	11.1	22.2	9.0	17.6		21.0		16.8				
Green Ext Time (p_c), s	0.1	3.0	0.0	0.5		5.1		2.3				
Intersection Summary												
HCM 2010 Ctrl Delay			32.7									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
3: 6th Ave & Main Street (SR 322)

Design Year 2035 w/o Improvements PM

12/16/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	19	500	18	24	422	19	77	31	35	53	23	17
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.99		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	0.89	1.00	1.00	0.89	1.00	1.00	0.89	1.00	1.00	0.89
Adj Sat Flow, veh/h/ln	1770	1735	1770	1770	1735	1770	1701	1685	1701	1701	1701	1701
Adj Flow Rate, veh/h	20	532	19	29	508	23	122	49	56	93	40	30
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.94	0.94	0.94	0.83	0.83	0.83	0.63	0.63	0.63	0.57	0.57	0.57
Percent Heavy Veh, %	2	2	2	2	2	2	1	1	1	0	0	0
Cap, veh/h	55	863	30	66	832	37	187	69	64	187	74	45
Arrive On Green	0.60	0.60	0.60	0.40	0.40	0.40	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	24	1433	50	41	1383	61	568	309	287	562	329	201
Grp Volume(v), veh/h	571	0	0	560	0	0	227	0	0	163	0	0
Grp Sat Flow(s),veh/h/ln	1507	0	0	1484	0	0	1164	0	0	1092	0	0
Q Serve(g_s), s	0.0	0.0	0.0	1.5	0.0	0.0	4.8	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	21.7	0.0	0.0	26.7	0.0	0.0	17.3	0.0	0.0	12.5	0.0	0.0
Prop In Lane	0.04		0.03	0.05		0.04	0.54		0.25	0.57		0.18
Lane Grp Cap(c), veh/h	948	0	0	935	0	0	321	0	0	306	0	0
V/C Ratio(X)	0.60	0.00	0.00	0.60	0.00	0.00	0.71	0.00	0.00	0.53	0.00	0.00
Avail Cap(c_a), veh/h	948	0	0	935	0	0	441	0	0	425	0	0
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.38	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	11.6	0.0	0.0	18.8	0.0	0.0	34.3	0.0	0.0	32.3	0.0	0.0
Incr Delay (d2), s/veh	1.1	0.0	0.0	2.8	0.0	0.0	3.2	0.0	0.0	1.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.3	0.0	0.0	12.0	0.0	0.0	5.8	0.0	0.0	3.9	0.0	0.0
LnGrp Delay(d),s/veh	12.7	0.0	0.0	21.7	0.0	0.0	37.5	0.0	0.0	33.8	0.0	0.0
LnGrp LOS	B			C			D			C		
Approach Vol, veh/h		571			560			227			163	
Approach Delay, s/veh		12.7			21.7			37.5			33.8	
Approach LOS		B			C			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		63.4		28.6		63.4		28.6				
Change Period (Y+Rc), s		8.0		8.0		8.0		8.0				
Max Green Setting (Gmax), s		46.0		30.0		46.0		30.0				
Max Q Clear Time (g_c+l1), s		23.7		14.5		28.7		19.3				
Green Ext Time (p_c), s		5.8		1.5		5.3		1.3				
Intersection Summary												
HCM 2010 Ctrl Delay			22.0									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
5: 8th Ave (SR 1007)/8th Ave & Main Street (SR 322)

Design Year 2035 w/o Improvements PM

12/16/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	5	347	160	97	336	6	245	55	135	31	80	17
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	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
Adj Sat Flow, veh/h/ln	1727	1710	1710	1676	1676	1693	1719	1719	1719	1761	1761	1761
Adj Flow Rate, veh/h	5	369	170	105	365	7	278	62	153	42	110	23
Adj No. of Lanes	0	1	1	1	1	0	0	1	1	0	1	0
Peak Hour Factor	0.94	0.94	0.94	0.92	0.92	0.92	0.88	0.88	0.88	0.73	0.73	0.73
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	0	0	0
Cap, veh/h	42	610	518	271	588	11	261	42	677	49	103	16
Arrive On Green	0.72	0.72	0.72	0.72	0.72	0.72	0.47	0.47	0.47	0.47	0.47	0.47
Sat Flow, veh/h	5	1700	1443	776	1639	31	406	91	1448	0	219	33
Grp Volume(v), veh/h	374	0	170	105	0	372	340	0	153	175	0	0
Grp Sat Flow(s),veh/h/ln	1705	0	1443	776	0	1670	497	0	1448	253	0	0
Q Serve(g_s), s	0.0	0.0	4.0	8.6	0.0	10.4	0.0	0.0	5.8	0.0	0.0	0.0
Cycle Q Clear(g_c), s	10.1	0.0	4.0	18.7	0.0	10.4	43.0	0.0	5.8	43.0	0.0	0.0
Prop In Lane	0.01		1.00	1.00		0.02	0.82		1.00	0.24		0.13
Lane Grp Cap(c), veh/h	651	0	518	271	0	599	303	0	677	167	0	0
V/C Ratio(X)	0.57	0.00	0.33	0.39	0.00	0.62	1.12	0.00	0.23	1.05	0.00	0.00
Avail Cap(c_a), veh/h	651	0	518	271	0	599	303	0	677	167	0	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.90	0.00	0.90	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	9.8	0.0	8.9	14.5	0.0	9.8	29.5	0.0	14.6	27.7	0.0	0.0
Incr Delay (d2), s/veh	3.7	0.0	1.7	3.7	0.0	4.3	88.4	0.0	0.2	83.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	0.0	1.8	2.1	0.0	5.3	15.1	0.0	2.3	6.9	0.0	0.0
LnGrp Delay(d),s/veh	13.4	0.0	10.6	18.2	0.0	14.1	118.0	0.0	14.8	111.4	0.0	0.0
LnGrp LOS	B		B	B		B	F		B	F		
Approach Vol, veh/h		544			477			493			175	
Approach Delay, s/veh		12.5			15.0			86.0			111.4	
Approach LOS		B			B			F			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		41.0		51.0		41.0		51.0				
Change Period (Y+Rc), s		8.0		8.0		8.0		8.0				
Max Green Setting (Gmax), s		33.0		43.0		33.0		43.0				
Max Q Clear Time (g_c+l1), s		12.1		45.0		20.7		45.0				
Green Ext Time (p_c), s		5.1		0.0		4.1		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			44.9									
HCM 2010 LOS			D									

HCM 2010 Signalized Intersection Summary
6: 9th Ave & Main Street (SR 322)

Design Year 2035 w/o Improvements PM

12/16/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	23	470	21	0	422	56	17	30	32	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.95			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1626	1693	1727	0	1644	1693	1805	1770	1770			
Adj Flow Rate, veh/h	25	505	23	0	469	62	27	47	50			
Adj No. of Lanes	1	1	0	0	1	0	0	1	1			
Peak Hour Factor	0.93	0.93	0.93	0.90	0.90	0.90	0.64	0.64	0.64			
Percent Heavy Veh, %	2	2	2	0	3	3	2	2	2			
Cap, veh/h	554	1208	55	0	1066	141	47	82	107			
Arrive On Green	1.00	1.00	1.00	0.00	0.75	0.75	0.07	0.07	0.07			
Sat Flow, veh/h	756	1606	73	0	1418	187	634	1104	1433			
Grp Volume(v), veh/h	25	0	528	0	0	531	74	0	50			
Grp Sat Flow(s),veh/h/ln	756	0	1680	0	0	1605	1738	0	1433			
Q Serve(g_s), s	0.5	0.0	0.0	0.0	0.0	11.3	3.8	0.0	3.1			
Cycle Q Clear(g_c), s	11.8	0.0	0.0	0.0	0.0	11.3	3.8	0.0	3.1			
Prop In Lane	1.00		0.04	0.00		0.12	0.36		1.00			
Lane Grp Cap(c), veh/h	554	0	1263	0	0	1207	129	0	107			
V/C Ratio(X)	0.05	0.00	0.42	0.00	0.00	0.44	0.57	0.00	0.47			
Avail Cap(c_a), veh/h	554	0	1263	0	0	1207	359	0	296			
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.90	0.00	0.90	0.00	0.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	1.0	0.0	0.0	0.0	0.0	4.2	41.2	0.0	40.8			
Incr Delay (d2), s/veh	0.1	0.0	0.9	0.0	0.0	1.2	4.0	0.0	3.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.3	0.0	0.0	5.3	2.0	0.0	1.3			
LnGrp Delay(d),s/veh	1.1	0.0	0.9	0.0	0.0	5.4	45.1	0.0	44.0			
LnGrp LOS	A		A			A	D		D			
Approach Vol, veh/h		553			531			124				
Approach Delay, s/veh		0.9			5.4			44.7				
Approach LOS		A			A			D				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		77.2				77.2		14.8				
Change Period (Y+Rc), s		8.0				8.0		8.0				
Max Green Setting (Gmax), s		57.0				57.0		19.0				
Max Q Clear Time (g_c+l1), s		13.8				13.3		5.8				
Green Ext Time (p_c), s		3.3				3.3		0.3				
Intersection Summary												
HCM 2010 Ctrl Delay			7.4									
HCM 2010 LOS			A									

HCM 2010 Signalized Intersection Summary
7: 5th Ave (SR 68) & South Street

Design Year 2035 w/o Improvements PM

12/16/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	4	56	71	184	76	16	57	471	41	9	341	3
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	0.99		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1919	1855	1919	1881	1848	1881	1881	1831	1881	1948	1928	1948
Adj Flow Rate, veh/h	4	78	113	245	104	25	77	561	60	13	379	4
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	1.00	0.72	0.63	0.75	0.73	0.63	0.74	0.84	0.68	0.67	0.90	0.75
Percent Heavy Veh, %	0	0	0	1	1	1	0	3	3	0	1	1
Cap, veh/h	64	230	320	391	137	31	366	773	83	287	629	7
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.04	0.48	0.48	0.33	0.33	0.33
Sat Flow, veh/h	8	692	965	876	413	92	1791	1625	174	834	1905	20
Grp Volume(v), veh/h	195	0	0	374	0	0	77	0	621	13	0	383
Grp Sat Flow(s),veh/h/ln	1665	0	0	1382	0	0	1791	0	1799	834	0	1925
Q Serve(g_s), s	0.0	0.0	0.0	9.2	0.0	0.0	1.6	0.0	16.5	0.8	0.0	9.9
Cycle Q Clear(g_c), s	5.3	0.0	0.0	14.5	0.0	0.0	1.6	0.0	16.5	8.6	0.0	9.9
Prop In Lane	0.02		0.58	0.66		0.07	1.00		0.10	1.00		0.01
Lane Grp Cap(c), veh/h	614	0	0	559	0	0	366	0	856	287	0	636
V/C Ratio(X)	0.32	0.00	0.00	0.67	0.00	0.00	0.21	0.00	0.73	0.05	0.00	0.60
Avail Cap(c_a), veh/h	950	0	0	827	0	0	585	0	1775	611	0	1384
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.1	0.0	0.0	17.9	0.0	0.0	12.2	0.0	12.6	19.5	0.0	16.7
Incr Delay (d2), s/veh	0.4	0.0	0.0	2.0	0.0	0.0	0.4	0.0	1.7	0.1	0.0	1.3
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	2.5	0.0	0.0	5.9	0.0	0.0	0.8	0.0	8.5	0.2	0.0	5.4
LnGrp Delay(d),s/veh	15.5	0.0	0.0	19.9	0.0	0.0	12.6	0.0	14.2	19.6	0.0	18.0
LnGrp LOS	B			B			B		B	B		B
Approach Vol, veh/h		195			374			698			396	
Approach Delay, s/veh		15.5			19.9			14.1			18.1	
Approach LOS		B			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		34.4		25.4	8.7	25.8		25.4				
Change Period (Y+Rc), s		6.0		5.5	6.0	6.0		5.5				
Max Green Setting (Gmax), s		59.0		32.0	10.0	43.0		32.0				
Max Q Clear Time (g_c+I1), s		18.5		7.3	3.6	11.9		16.5				
Green Ext Time (p_c), s		8.2		3.9	0.1	7.8		3.3				
Intersection Summary												
HCM 2010 Ctrl Delay			16.5									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary
8: Route 68 & Clarion Mall Drive/Kane Drive

Design Year 2035 w/o Improvements PM

12/16/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	118	7	91	20	7	26	48	431	10	26	481	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1996	1996	1919	1996	1958	1996	1844	1828	1881	1845	1884	1919
Adj Flow Rate, veh/h	140	16	0	28	16	40	60	519	16	32	573	0
Adj No. of Lanes	0	1	1	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.84	0.44	0.88	0.71	0.44	0.65	0.80	0.83	0.63	0.81	0.84	0.75
Percent Heavy Veh, %	0	0	4	0	0	0	2	3	3	4	2	2
Cap, veh/h	233	20	264	98	63	107	584	1370	42	652	1288	0
Arrive On Green	0.12	0.12	0.00	0.12	0.12	0.12	0.08	1.00	1.00	0.68	0.68	0.00
Sat Flow, veh/h	1384	158	1631	439	512	865	1756	1764	54	858	1884	0
Grp Volume(v), veh/h	156	0	0	84	0	0	60	0	535	32	573	0
Grp Sat Flow(s),veh/h/ln	1542	0	1631	1816	0	0	1756	0	1818	858	1884	0
Q Serve(g_s), s	6.1	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.3	15.2	0.0
Cycle Q Clear(g_c), s	10.7	0.0	0.0	4.7	0.0	0.0	1.0	0.0	0.0	1.3	15.2	0.0
Prop In Lane	0.90		1.00	0.33		0.48	1.00		0.03	1.00		0.00
Lane Grp Cap(c), veh/h	252	0	264	268	0	0	584	0	1412	652	1288	0
V/C Ratio(X)	0.62	0.00	0.00	0.31	0.00	0.00	0.10	0.00	0.38	0.05	0.44	0.00
Avail Cap(c_a), veh/h	473	0	507	512	0	0	996	0	1412	652	1288	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.92	0.00	0.92	1.00	1.00	0.00
Uniform Delay (d), s/veh	46.8	0.0	0.0	44.3	0.0	0.0	5.1	0.0	0.0	5.7	7.9	0.0
Incr Delay (d2), s/veh	2.5	0.0	0.0	0.7	0.0	0.0	0.1	0.0	0.7	0.1	1.1	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	4.8	0.0	0.0	2.4	0.0	0.0	0.5	0.0	0.3	0.3	8.2	0.0
LnGrp Delay(d),s/veh	49.3	0.0	0.0	45.0	0.0	0.0	5.1	0.0	0.7	5.9	9.0	0.0
LnGrp LOS	D			D			A		A	A	A	
Approach Vol, veh/h	156			84			595			605		
Approach Delay, s/veh	49.3			45.0			1.2			8.8		
Approach LOS	D			D			A			A		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	2			4	5	6	8					
Phs Duration (G+Y+Rc), s	91.4			18.6	10.2	81.2	18.6					
Change Period (Y+Rc), s	6.0			5.0	6.0	6.0	5.0					
Max Green Setting (Gmax), s	69.0			30.0	30.0	33.0	30.0					
Max Q Clear Time (g_c+l1), s	2.0			12.7	3.0	17.2	6.7					
Green Ext Time (p_c), s	47.2			0.9	0.2	14.0	0.9					
Intersection Summary												
HCM 2010 Ctrl Delay	12.2											
HCM 2010 LOS	B											

HCM 2010 Signalized Intersection Summary
9: Route 68 & Perkins Drive/Commerical Drive

Design Year 2035 w/o Improvements PM

12/16/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	217	26	314	67	21	2	164	272	10	39	325	213
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1919	1902	1919	1900	1871	1900	1809	1846	1881	1828	1881	1919
Adj Flow Rate, veh/h	268	36	357	124	32	4	176	344	24	48	401	248
Adj No. of Lanes	0	1	1	0	1	0	1	1	0	1	1	1
Peak Hour Factor	0.81	0.72	0.88	0.54	0.66	0.50	0.93	0.79	0.42	0.81	0.81	0.86
Percent Heavy Veh, %	0	0	0	0	0	0	4	2	2	5	2	0
Cap, veh/h	426	49	644	135	30	3	210	916	64	62	848	735
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.12	0.54	0.54	0.02	0.30	0.30
Sat Flow, veh/h	1335	179	1631	283	108	10	1723	1706	119	1741	1881	1631
Grp Volume(v), veh/h	304	0	357	160	0	0	176	0	368	48	401	248
Grp Sat Flow(s),veh/h/ln	1515	0	1631	401	0	0	1723	0	1825	1741	1881	1631
Q Serve(g_s), s	0.0	0.0	18.7	9.9	0.0	0.0	11.0	0.0	12.9	3.0	19.1	13.0
Cycle Q Clear(g_c), s	20.1	0.0	18.7	30.0	0.0	0.0	11.0	0.0	12.9	3.0	19.1	13.0
Prop In Lane	0.88		1.00	0.77		0.02	1.00		0.07	1.00		1.00
Lane Grp Cap(c), veh/h	475	0	644	168	0	0	210	0	980	62	848	735
V/C Ratio(X)	0.64	0.00	0.55	0.95	0.00	0.00	0.84	0.00	0.38	0.77	0.47	0.34
Avail Cap(c_a), veh/h	475	0	644	168	0	0	470	0	980	475	848	735
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	0.86	0.86	0.86
Uniform Delay (d), s/veh	36.4	0.0	25.8	50.1	0.0	0.0	47.2	0.0	14.8	53.2	27.7	25.6
Incr Delay (d2), s/veh	2.9	0.0	1.0	56.1	0.0	0.0	8.6	0.0	1.1	15.7	1.6	1.1
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	8.7	0.0	8.6	7.5	0.0	0.0	5.7	0.0	6.7	1.7	10.3	6.1
LnGrp Delay(d),s/veh	39.3	0.0	26.8	106.2	0.0	0.0	55.8	0.0	15.9	68.9	29.4	26.7
LnGrp LOS	D		C	F			E		B	E	C	C
Approach Vol, veh/h		661			160			544			697	
Approach Delay, s/veh		32.6			106.2			28.8			31.1	
Approach LOS		C			F			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.9	65.1		35.0	19.4	55.6		35.0				
Change Period (Y+Rc), s	6.0	6.0		5.0	6.0	6.0		5.0				
Max Green Setting (Gmax), s	30.0	33.0		30.0	30.0	33.0		30.0				
Max Q Clear Time (g_c+I1), s	5.0	14.9		22.1	13.0	21.1		32.0				
Green Ext Time (p_c), s	0.1	11.1		2.4	0.5	8.1		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			36.8									
HCM 2010 LOS			D									

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	25	509	54	67	465	66	0	0	3	0	0	0
Conflicting Peds, #/hr	0	0	0	20	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, %	-	1	-	-	1	-	-	1	-	-	1	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	0	0	0	0	0	0
Mvmt Flow	28	566	60	74	517	73	0	0	3	0	0	0
Major/Minor	Major1			Major2			Minor1					
Conflicting Flow All	590	0	0	626	0	0	1353	1390	616			
Stage 1	-	-	-	-	-	-	651	651	-			
Stage 2	-	-	-	-	-	-	702	739	-			
Critical Hdwy	4.12	-	-	4.12	-	-	6.6	6.7	6.3			
Critical Hdwy Stg 1	-	-	-	-	-	-	5.6	5.7	-			
Critical Hdwy Stg 2	-	-	-	-	-	-	5.6	5.7	-			
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.5	4	3.3			
Pot Cap-1 Maneuver	985	-	-	956	-	-	155	133	486			
Stage 1	-	-	-	-	-	-	504	451	-			
Stage 2	-	-	-	-	-	-	476	409	-			
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	985	-	-	937	-	-	131	0	477			
Mov Cap-2 Maneuver	-	-	-	-	-	-	131	0	-			
Stage 1	-	-	-	-	-	-	482	0	-			
Stage 2	-	-	-	-	-	-	419	0	-			
Approach	EB			WB			NB					
HCM Control Delay, s	0.4			1			12.6					
HCM LOS	B											
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR					
Capacity (veh/h)	477	985	-	-	937	-	-					
HCM Lane V/C Ratio	0.007	0.028	-	-	0.079	-	-					
HCM Control Delay (s)	12.6	8.8	0	-	9.2	0	-					
HCM Lane LOS	B	A	A	-	A	A	-					
HCM 95th %tile Q(veh)	0	0.1	-	-	0.3	-	-					

APPENDIX K

Design Year 2035 Queuing

Table – Design Year 2035 95th Percentile Queue (ft.) Summary

Intersection	Available Storage	AM Queue	Midday Queue	PM Queue
Main Street (SR 0322) with 2nd Avenue				
Eastbound (Main Street)	>1000	124	100	158
Westbound (Main Street)	>1000	159	136	154
Northbound (2 nd Avenue)	>1000	99	43	52
Southbound (2 nd Avenue)	400	70	57	91
Main Street (SR 0322) with 5th Avenue (SR 0068)				
Eastbound (Main Street)				
<i>Left Turn / Through</i>	>1000	387	297	350
<i>Right Turn</i>	100	199	180	194
Westbound (Main Street)				
<i>Left Turn</i>	50	132	142	142
<i>Through / Right Turn</i>	425	209	286	289
Northbound (5 th Avenue)				
<i>Left Turn</i>	125	115	122	168
<i>Through / Right Turn</i>	800	112	167	223
Southbound (5 th Avenue)				
<i>Left Turn</i>	>1000	143	226	318
<i>Through / Right Turn</i>	65	85	84	82
Main Street (SR 0322) with 6th Avenue				
Eastbound (Main Street)	440	178	221	291
Westbound (Main Street)	510	205	262	289
Northbound (6 th Avenue)	>1000	87	95	161
Southbound (6 th Avenue)	400	62	116	110
Main Street (SR 0322) with 7th Avenue				
Eastbound (Main Street)	510	73	111	110
Westbound (Main Street)	570	123	105	156
Northbound (7 th Avenue)	>1000	0	0	22
Main Street (SR 0322) with 8th Avenue				
Eastbound (Main Street)				
<i>Left Turn / Through</i>	530	186	201	216
<i>Right Turn</i>	150	113	110	151
Westbound (Main Street)				
<i>Left Turn</i>	110	72	63	117
<i>Through / Right Turn</i>	425	115	112	167
Northbound (8 th Avenue)				
<i>Left Turn / Through</i>	380	177	197	257
<i>Right Turn</i>	170	121	111	148
Southbound (8 th Avenue)	390	93	81	126
Main Street (SR 0322) with 9th Avenue				
Eastbound (Main Street)				
<i>Left Turn</i>	130	53	26	33
<i>Through / Right Turn</i>	420	171	170	179
Westbound (Main Street)	>1000	168	180	192
Northbound (9 th Avenue)				
<i>Left Turn / Through</i>	430	50	41	83
<i>Right Turn</i>	65	30	31	56

Intersection	Available Storage	AM Queue	Midday Queue	PM Queue
5 th Avenue (SR 0068)with South Street				
Eastbound (South Street)	460		61	98
Westbound (South Street)	460		124	170
Northbound (5 th Avenue)				
Left Turn	75		53	105
Through / Right Turn	>1000		163	252
Southbound (5 th Avenue)				
Left Turn	110		15	41
Through / Right Turn	365		154	190
5 th Avenue (SR 0068)with Clarion Mall Drive / Kane Drive				
Eastbound (Clarion Mall Drive)				
Left Turn / Through	950		146	145
Right Turn	100		60	61
Westbound (Kane Drive)	560		67	74
Northbound (5 th Avenue)				
Left Turn	400		58	45
Through / Right Turn	780		136	92
Southbound (5 th Avenue)				
Left Turn	240		45	34
Through / Right Turn	>1000		158	152
5 th Avenue (SR 0068)with Perkins Drive / Commercial Drive				
Eastbound (Perkins Drive)				
Left Turn / Through	880		242	239
Right Turn	200		137	168
Westbound (Commercial Drive)	185		106	121
Northbound (5 th Avenue)				
Left Turn	950		226	191
Through / Right Turn	>1000		111	144
Southbound (5 th Avenue)				
Left Turn	85		72	90
Through	780		143	213
Right Turn	165		76	109

Intersection: 1: Second Avenue & Main Street (SR 322)

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	151	210	130	93
Average Queue (ft)	60	83	52	40
95th Queue (ft)	124	159	99	70
Link Distance (ft)	752	1551	255	265
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 2: 5th Ave (SR 68)/5th Ave (SR 1005) & Main Street (SR 322)

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	LT	R	L	TR	L	TR	L	TR
Maximum Queue (ft)	495	175	124	261	148	149	176	75
Average Queue (ft)	204	96	77	105	62	61	61	62
95th Queue (ft)	387	199	132	209	115	112	143	85
Link Distance (ft)	1551			457		1237	899	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		100	50		125			65
Storage Blk Time (%)	25	2	37	17	1	1	4	16
Queuing Penalty (veh)	49	8	105	18	1	1	4	9

Intersection: 3: 6th Ave & Main Street (SR 322)

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	256	238	100	76
Average Queue (ft)	82	100	47	30
95th Queue (ft)	178	205	87	62
Link Distance (ft)	457	519	856	919
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: 7th Ave & Main Street (SR 322)

Movement	EB	WB
Directions Served	LTR	LTR
Maximum Queue (ft)	116	178
Average Queue (ft)	19	40
95th Queue (ft)	73	123
Link Distance (ft)	519	557
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 5: 8th Ave (SR 1007)/8th Ave & Main Street (SR 322)

Movement	EB	EB	WB	WB	NB	NB	SB
Directions Served	LT	R	L	TR	LT	R	LTR
Maximum Queue (ft)	217	174	95	153	216	156	111
Average Queue (ft)	102	45	34	58	102	58	47
95th Queue (ft)	186	113	72	115	177	121	93
Link Distance (ft)	557			406	848		927
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		150	110			170	
Storage Blk Time (%)	3	0	0	2	1	0	
Queuing Penalty (veh)	4	0	0	1	1	0	

Intersection: 6: 9th Ave & Main Street (SR 322)

Movement	EB	EB	WB	NB	NB
Directions Served	L	TR	TR	LT	R
Maximum Queue (ft)	65	209	230	64	31
Average Queue (ft)	23	97	80	19	8
95th Queue (ft)	53	171	168	50	30
Link Distance (ft)		406	1170	866	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	130				65
Storage Blk Time (%)		3		0	
Queuing Penalty (veh)		2		0	

Network Summary

Network wide Queuing Penalty: 204

Intersection: 1: Second Avenue & Main Street (SR 322)

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	133	166	44	73
Average Queue (ft)	47	57	19	29
95th Queue (ft)	100	136	43	57
Link Distance (ft)	752	1551	650	438
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 2: 5th Ave (SR 68)/5th Ave (SR 1005) & Main Street (SR 322)

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	LT	R	L	TR	L	TR	L	TR
Maximum Queue (ft)	356	175	124	354	171	199	240	75
Average Queue (ft)	160	83	94	145	63	97	110	69
95th Queue (ft)	297	180	142	286	122	167	226	84
Link Distance (ft)	1551			457		865	899	
Upstream Blk Time (%)				0				
Queuing Penalty (veh)				0				
Storage Bay Dist (ft)		100	50		125			65
Storage Blk Time (%)	23	2	52	25	1	4	3	33
Queuing Penalty (veh)	37	6	190	41	2	5	6	13

Intersection: 3: 6th Ave & Main Street (SR 322)

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	253	299	115	158
Average Queue (ft)	122	154	47	61
95th Queue (ft)	221	262	95	116
Link Distance (ft)	457	519	856	919
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: 7th Ave & Main Street (SR 322)

Movement	EB	WB
Directions Served	LTR	LTR
Maximum Queue (ft)	172	177
Average Queue (ft)	28	29
95th Queue (ft)	111	105
Link Distance (ft)	519	557
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 5: 8th Ave (SR 1007)/8th Ave & Main Street (SR 322)

Movement	EB	EB	WB	WB	NB	NB	SB
Directions Served	LT	R	L	TR	LT	R	LTR
Maximum Queue (ft)	224	158	81	151	254	174	94
Average Queue (ft)	117	47	29	48	111	55	41
95th Queue (ft)	201	110	63	112	197	111	81
Link Distance (ft)	557			406	848		927
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		150	110			170	
Storage Blk Time (%)	4	0	0	1	2		
Queuing Penalty (veh)	4	0	0	1	2		

Intersection: 6: 9th Ave & Main Street (SR 322)

Movement	EB	EB	WB	NB	NB
Directions Served	L	TR	TR	LT	R
Maximum Queue (ft)	30	190	219	52	35
Average Queue (ft)	7	87	98	13	9
95th Queue (ft)	26	170	180	41	31
Link Distance (ft)		406	1170	866	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	130				65
Storage Blk Time (%)		2		0	0
Queuing Penalty (veh)		0		0	0

Intersection: 7: 5th Ave (SR 68) & South Street

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	L	TR	L	TR
Maximum Queue (ft)	69	163	76	215	31	185
Average Queue (ft)	29	69	19	86	2	89
95th Queue (ft)	61	124	53	163	15	154
Link Distance (ft)	707	760		586		865
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			75		110	
Storage Blk Time (%)			0	7		3
Queuing Penalty (veh)			0	2		0

Intersection: 8: Route 68 & Clarion Mall Drive/Kane Drive

Movement	EB	EB	WB	NB	NB	SB	SB
Directions Served	LT	R	LTR	L	TR	L	TR
Maximum Queue (ft)	185	111	85	71	182	56	217
Average Queue (ft)	78	8	30	23	57	18	67
95th Queue (ft)	146	60	67	58	136	45	158
Link Distance (ft)	1150		1100		873		1302
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		100		400		240	
Storage Blk Time (%)	7	0					0
Queuing Penalty (veh)	6	0					0

Intersection: 9: Route 68 & Perkins Drive/Commerical Drive

Movement	EB	EB	WB	NB	NB	SB	SB	SB
Directions Served	LT	R	LTR	L	TR	L	T	R
Maximum Queue (ft)	295	238	135	247	139	108	181	104
Average Queue (ft)	137	52	55	135	50	31	70	37
95th Queue (ft)	242	137	106	226	111	72	143	76
Link Distance (ft)	1076		1116		1241		873	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		200		950		85		165
Storage Blk Time (%)	4					1	6	0
Queuing Penalty (veh)	7					3	11	0

Network Summary

Network wide Queuing Penalty: 338

Intersection: 1: Second Avenue & Main Street (SR 322)

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	219	199	61	121
Average Queue (ft)	76	78	23	47
95th Queue (ft)	158	154	52	91
Link Distance (ft)	752	1552	661	500
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 2: 5th Ave (SR 68)/5th Ave (SR 1005) & Main Street (SR 322)

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	LT	R	L	TR	L	TR	L	TR
Maximum Queue (ft)	406	175	125	354	192	288	374	75
Average Queue (ft)	194	88	88	156	89	120	157	71
95th Queue (ft)	350	194	142	289	168	223	318	82
Link Distance (ft)	1552			457		865	899	
Upstream Blk Time (%)				0				
Queuing Penalty (veh)				0				
Storage Bay Dist (ft)		100	50		125			65
Storage Blk Time (%)	29	1	45	25	4	8	7	42
Queuing Penalty (veh)	49	5	174	33	9	14	15	19

Intersection: 3: 6th Ave & Main Street (SR 322)

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	358	343	185	125
Average Queue (ft)	154	158	92	62
95th Queue (ft)	291	289	161	110
Link Distance (ft)	457	519	856	919
Upstream Blk Time (%)	0			
Queuing Penalty (veh)	0			
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: 7th Ave & Main Street (SR 322)

Movement	EB	WB	NB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	168	206	30
Average Queue (ft)	32	58	5
95th Queue (ft)	110	156	22
Link Distance (ft)	519	557	879
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 5: 8th Ave (SR 1007)/8th Ave & Main Street (SR 322)

Movement	EB	EB	WB	WB	NB	NB	SB
Directions Served	LT	R	L	TR	LT	R	LTR
Maximum Queue (ft)	259	202	174	212	300	193	146
Average Queue (ft)	117	71	56	82	157	62	69
95th Queue (ft)	216	151	117	167	257	148	126
Link Distance (ft)	557			406	848		927
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		150	110			170	
Storage Blk Time (%)	5	0	1	4	8	0	
Queuing Penalty (veh)	8	1	3	4	11	0	

Intersection: 6: 9th Ave & Main Street (SR 322)

Movement	EB	EB	WB	NB	NB
Directions Served	L	TR	TR	LT	R
Maximum Queue (ft)	39	185	232	111	72
Average Queue (ft)	11	96	95	38	22
95th Queue (ft)	33	179	192	83	56
Link Distance (ft)		406	1170	866	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	130				65
Storage Blk Time (%)		3		4	0
Queuing Penalty (veh)		1		1	0

Intersection: 7: 5th Ave (SR 68) & South Street

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	L	TR	L	TR
Maximum Queue (ft)	120	194	149	309	65	218
Average Queue (ft)	51	104	39	148	9	112
95th Queue (ft)	98	170	105	252	41	190
Link Distance (ft)	707	760		586		865
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			75		110	
Storage Blk Time (%)			0	21		7
Queuing Penalty (veh)			0	12		1

Intersection: 8: Route 68 & Clarion Mall Drive/Kane Drive

Movement	EB	EB	WB	NB	NB	SB	SB
Directions Served	LT	R	LTR	L	TR	L	TR
Maximum Queue (ft)	164	134	91	55	117	43	181
Average Queue (ft)	89	10	35	17	36	10	73
95th Queue (ft)	145	61	74	45	92	34	152
Link Distance (ft)	1150		1100		873		1302
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		100		400		240	
Storage Blk Time (%)	11	0					
Queuing Penalty (veh)	10	0					

Intersection: 9: Route 68 & Perkins Drive/Commerical Drive

Movement	EB	EB	WB	NB	NB	SB	SB	SB
Directions Served	LT	R	LTR	L	TR	L	T	R
Maximum Queue (ft)	278	214	152	216	197	134	264	179
Average Queue (ft)	145	78	63	115	71	39	114	47
95th Queue (ft)	239	168	121	191	144	90	213	109
Link Distance (ft)	1076		1116		1241		873	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		200		950		85		165
Storage Blk Time (%)	4	0				2	15	
Queuing Penalty (veh)	11	0				8	38	

Network Summary

Network wide Queuing Penalty: 427

APPENDIX L

Strategy #1 HCM

HCM 2010 Signalized Intersection Summary

8: Route 68 & Clarion Mall Drive/Kane Drive

Design Year 2035 with SR 68 Widening PM

6/29/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	118	7	91	20	7	26	48	431	10	26	481	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1996	1996	1919	1996	1958	1996	1844	1828	1881	1845	1884	1919
Adj Flow Rate, veh/h	140	16	0	28	16	40	60	519	16	32	573	0
Adj No. of Lanes	0	1	1	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.84	0.44	0.88	0.71	0.44	0.65	0.80	0.83	0.63	0.81	0.84	0.75
Percent Heavy Veh, %	0	0	4	0	0	0	2	3	3	4	2	2
Cap, veh/h	234	20	202	98	63	107	648	2670	82	652	2446	0
Arrive On Green	0.12	0.12	0.00	0.12	0.12	0.12	0.08	1.00	1.00	0.68	0.68	0.00
Sat Flow, veh/h	1384	158	1631	439	511	864	1756	3440	106	858	3673	0
Grp Volume(v), veh/h	156	0	0	84	0	0	60	262	273	32	573	0
Grp Sat Flow(s),veh/h/ln	1542	0	1631	1815	0	0	1756	1736	1809	858	1790	0
Q Serve(g_s), s	6.1	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.3	6.6	0.0
Cycle Q Clear(g_c), s	10.7	0.0	0.0	4.7	0.0	0.0	1.0	0.0	0.0	1.3	6.6	0.0
Prop In Lane	0.90		1.00	0.33		0.48	1.00		0.06	1.00		0.00
Lane Grp Cap(c), veh/h	253	0	202	269	0	0	648	1348	1404	652	2446	0
V/C Ratio(X)	0.62	0.00	0.00	0.31	0.00	0.00	0.09	0.19	0.19	0.05	0.23	0.00
Avail Cap(c_a), veh/h	527	0	504	572	0	0	773	1348	1404	652	2446	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.98	0.98	0.98	1.00	1.00	0.00
Uniform Delay (d), s/veh	46.8	0.0	0.0	44.3	0.0	0.0	4.1	0.0	0.0	5.7	6.6	0.0
Incr Delay (d2), s/veh	2.4	0.0	0.0	0.7	0.0	0.0	0.1	0.3	0.3	0.1	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	4.8	0.0	0.0	2.4	0.0	0.0	0.5	0.1	0.1	0.3	3.3	0.0
LnGrp Delay(d),s/veh	49.2	0.0	0.0	44.9	0.0	0.0	4.1	0.3	0.3	5.9	6.8	0.0
LnGrp LOS	D			D			A	A	A	A	A	
Approach Vol, veh/h	156				84		595				605	
Approach Delay, s/veh	49.2				44.9		0.7				6.7	
Approach LOS	D				D		A				A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	2		4		5		6		8			
Phs Duration (G+Y+Rc), s	91.4		18.6		10.2		81.2		18.6			
Change Period (Y+Rc), s	6.0		5.0		6.0		6.0		5.0			
Max Green Setting (Gmax), s	65.0		34.0		12.0		47.0		34.0			
Max Q Clear Time (g_c+I1), s	2.0		12.7		3.0		8.6		6.7			
Green Ext Time (p_c), s	42.5		0.9		0.1		29.4		1.0			
Intersection Summary												
HCM 2010 Ctrl Delay			11.1									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary
9: Route 68 & Perkins Drive/Commerical Drive

Design Year 2035 with SR 68 Widening PM

6/29/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	217	26	314	67	21	2	164	272	10	39	325	213
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1919	1902	1919	1900	1871	1900	1809	1846	1881	1828	1881	1919
Adj Flow Rate, veh/h	268	36	357	124	32	4	176	344	24	48	401	248
Adj No. of Lanes	0	1	1	0	1	0	1	2	0	1	2	1
Peak Hour Factor	0.81	0.72	0.88	0.54	0.66	0.50	0.93	0.79	0.42	0.81	0.81	0.86
Percent Heavy Veh, %	0	0	0	0	0	0	4	2	2	5	2	0
Cap, veh/h	512	60	751	207	48	5	208	1567	109	61	1377	628
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.12	0.47	0.47	0.01	0.13	0.13
Sat Flow, veh/h	1327	178	1631	438	141	15	1723	3329	231	1741	3575	1631
Grp Volume(v), veh/h	304	0	357	160	0	0	176	181	187	48	401	248
Grp Sat Flow(s),veh/h/ln	1505	0	1631	594	0	0	1723	1754	1806	1741	1787	1631
Q Serve(g_s), s	0.0	0.0	16.6	14.2	0.0	0.0	11.0	6.7	6.7	3.0	11.2	15.4
Cycle Q Clear(g_c), s	18.2	0.0	16.6	32.5	0.0	0.0	11.0	6.7	6.7	3.0	11.2	15.4
Prop In Lane	0.88		1.00	0.77		0.02	1.00		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	572	0	751	260	0	0	208	826	850	61	1377	628
V/C Ratio(X)	0.53	0.00	0.48	0.62	0.00	0.00	0.85	0.22	0.22	0.78	0.29	0.39
Avail Cap(c_a), veh/h	673	0	864	337	0	0	345	826	850	111	1377	628
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.97	0.97	0.97
Uniform Delay (d), s/veh	30.0	0.0	20.5	41.9	0.0	0.0	47.4	17.2	17.2	53.9	34.4	36.2
Incr Delay (d2), s/veh	0.8	0.0	0.5	2.4	0.0	0.0	9.7	0.6	0.6	18.6	0.5	1.8
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	7.7	0.0	7.6	4.8	0.0	0.0	5.8	3.3	3.5	1.8	5.6	7.3
LnGrp Delay(d),s/veh	30.8	0.0	21.0	44.3	0.0	0.0	57.1	17.8	17.8	72.6	34.9	38.0
LnGrp LOS	C		C	D			E	B	B	E	C	D
Approach Vol, veh/h	661					160		544		697		
Approach Delay, s/veh	25.5					44.3		30.5		38.6		
Approach LOS	C					D		C		D		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	4		5	6	8					
Phs Duration (G+Y+Rc), s	9.9	57.8	42.3		19.3	48.4	42.3					
Change Period (Y+Rc), s	6.0	6.0	5.0		6.0	6.0	5.0					
Max Green Setting (Gmax), s	41.0		45.0		22.0	26.0	45.0					
Max Q Clear Time (g_c+I), s	8.7		20.2		13.0	13.2	34.5					
Green Ext Time (p_c), s	0.0	15.4	3.8		0.3	8.4	2.8					
Intersection Summary												
HCM 2010 Ctrl Delay			32.7									
HCM 2010 LOS			C									

Intersection						
Int Delay, s/veh	5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	63	131	55	520	357	62
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	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-2	2	-
Peak Hour Factor	90	90	90	82	83	90
Heavy Vehicles, %	2	2	2	3	2	2
Mvmt Flow	70	146	61	634	430	69
Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1221	465	499	0	-	0
Stage 1	465	-	-	-	-	-
Stage 2	756	-	-	-	-	-
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	199	597	1065	-	-	-
Stage 1	632	-	-	-	-	-
Stage 2	464	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	188	597	1065	-	-	-
Mov Cap-2 Maneuver	188	-	-	-	-	-
Stage 1	632	-	-	-	-	-
Stage 2	437	-	-	-	-	-
Approach	EB		NB		SB	
HCM Control Delay, s	30.4		0.8		0	
HCM LOS	D					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1065	-	350	-	-	
HCM Lane V/C Ratio	0.057	-	0.616	-	-	
HCM Control Delay (s)	8.6	-	30.4	-	-	
HCM Lane LOS	A	-	D	-	-	
HCM 95th %tile Q(veh)	0.2	-	3.9	-	-	

APPENDIX M

Strategy #2 HCM

HCM 2010 Signalized Intersection Summary
1: Second Avenue & Main Street (SR 322)

Design Year 2035 with Connection PM

6/27/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	39	258	126	9	334	46	94	26	1	67	18	39
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.99		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1956	1898	1956	2016	1920	2016	1966	1937	1966	1966	1945	1966
Adj Flow Rate, veh/h	65	300	150	13	393	69	115	35	4	78	25	57
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.60	0.86	0.84	0.67	0.85	0.67	0.82	0.75	0.25	0.86	0.71	0.69
Percent Heavy Veh, %	3	3	3	6	6	6	0	0	0	0	0	0
Cap, veh/h	161	688	317	81	1019	175	303	75	7	212	64	97
Arrive On Green	0.65	0.65	0.65	0.65	0.65	0.65	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	128	1060	489	16	1570	269	1142	471	43	689	402	604
Grp Volume(v), veh/h	515	0	0	475	0	0	154	0	0	160	0	0
Grp Sat Flow(s),veh/h/ln	1677	0	0	1855	0	0	1656	0	0	1696	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
Cycle Q Clear(g_c), s	7.4	0.0	0.0	6.3	0.0	0.0	4.0	0.0	0.0	4.2	0.0	0.0
Prop In Lane	0.13		0.29	0.03		0.15	0.75		0.03	0.49		0.36
Lane Grp Cap(c), veh/h	1166	0	0	1275	0	0	385	0	0	373	0	0
V/C Ratio(X)	0.44	0.00	0.00	0.37	0.00	0.00	0.40	0.00	0.00	0.43	0.00	0.00
Avail Cap(c_a), veh/h	1565	0	0	1727	0	0	791	0	0	805	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	4.5	0.0	0.0	4.3	0.0	0.0	20.1	0.0	0.0	20.2	0.0	0.0
Incr Delay (d2), s/veh	1.0	0.0	0.0	0.7	0.0	0.0	0.7	0.0	0.0	0.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	0.0	0.0	3.4	0.0	0.0	2.1	0.0	0.0	2.2	0.0	0.0
LnGrp Delay(d),s/veh	5.5	0.0	0.0	5.0	0.0	0.0	20.8	0.0	0.0	21.0	0.0	0.0
LnGrp LOS	A			A			C			C		
Approach Vol, veh/h		515			475			154			160	
Approach Delay, s/veh		5.5			5.0			20.8			21.0	
Approach LOS		A			A			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		39.0		13.4		39.0		13.4				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		47.0		23.0		47.0		23.0				
Max Q Clear Time (g_c+l1), s		9.4		6.2		8.3		6.0				
Green Ext Time (p_c), s		24.6		1.2		25.1		1.2				
Intersection Summary												
HCM 2010 Ctrl Delay			9.0									
HCM 2010 LOS			A									

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	22	367	56	130	365	22	90	124	124	46	200	27
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	0.99		0.99
Parking Bus, Adj	1.00	1.00	0.89	1.00	1.00	0.89	1.00	1.00	0.89	1.00	1.00	0.89
Adj Sat Flow, veh/h/ln	1693	1660	1660	1668	1735	1770	1676	1734	1743	1693	1761	1761
Adj Flow Rate, veh/h	23	390	60	157	440	27	98	135	135	53	230	31
Adj No. of Lanes	0	1	1	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.94	0.94	0.94	0.83	0.83	0.83	0.92	0.92	0.92	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	0	0	0	0	0	0
Cap, veh/h	58	570	541	182	782	48	215	230	230	244	258	35
Arrive On Green	0.36	0.36	0.36	0.23	1.00	1.00	0.07	0.33	0.33	0.19	0.19	0.19
Sat Flow, veh/h	45	1569	1247	1589	1440	88	1596	706	706	996	1350	182
Grp Volume(v), veh/h	413	0	60	157	0	467	98	0	270	53	0	261
Grp Sat Flow(s),veh/h/ln	1614	0	1247	1589	0	1528	1596	0	1412	996	0	1532
Q Serve(g_s), s	3.3	0.0	2.6	8.7	0.0	0.0	4.3	0.0	14.7	4.3	0.0	15.3
Cycle Q Clear(g_c), s	19.6	0.0	2.6	8.7	0.0	0.0	4.3	0.0	14.7	6.5	0.0	15.3
Prop In Lane	0.06		1.00	1.00		0.06	1.00		0.50	1.00		0.12
Lane Grp Cap(c), veh/h	628	0	541	182	0	830	215	0	461	244	0	293
V/C Ratio(X)	0.66	0.00	0.11	0.86	0.00	0.56	0.46	0.00	0.59	0.22	0.00	0.89
Avail Cap(c_a), veh/h	628	0	541	190	0	830	225	0	476	249	0	300
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.89	0.00	0.89	0.69	0.00	0.69	0.63	0.00	0.63	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.8	0.0	15.5	34.7	0.0	0.0	27.0	0.0	25.8	33.7	0.0	36.3
Incr Delay (d2), s/veh	4.7	0.0	0.4	22.6	0.0	1.9	1.0	0.0	1.1	0.4	0.0	26.3
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	9.7	0.0	1.0	4.9	0.0	0.4	1.9	0.0	5.8	1.2	0.0	8.6
LnGrp Delay(d),s/veh	29.5	0.0	15.9	57.3	0.0	1.9	28.0	0.0	26.9	34.2	0.0	62.6
LnGrp LOS	C		B	E		A	C		C	C		E
Approach Vol, veh/h		473			624			368			314	
Approach Delay, s/veh		27.8			15.8			27.2			57.8	
Approach LOS		C			B			C			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4		6		8				
Phs Duration (G+Y+Rc), s	16.6	39.4	12.4	23.6		56.0		36.0				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0		6.0		6.0				
Max Green Setting (Gmax), s	11.0	32.0	7.0	18.0		49.0		31.0				
Max Q Clear Time (g_c+I1), s	10.7	21.6	6.3	17.3		2.0		16.7				
Green Ext Time (p_c), s	0.0	3.2	0.0	0.2		4.6		2.3				
Intersection Summary												
HCM 2010 Ctrl Delay			28.8									
HCM 2010 LOS			C									
Notes												
User approved pedestrian interval to be less than phase max green.												

HCM 2010 Signalized Intersection Summary
3: 6th Ave & Main Street (SR 322)

Design Year 2035 with Connection PM

6/27/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	19	500	18	24	422	19	77	31	35	53	23	17
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.99		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	0.89	1.00	1.00	0.89	1.00	1.00	0.89	1.00	1.00	0.89
Adj Sat Flow, veh/h/ln	1770	1735	1770	1770	1735	1770	1701	1685	1701	1701	1701	1701
Adj Flow Rate, veh/h	20	532	19	29	508	23	122	49	56	93	40	30
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.94	0.94	0.94	0.83	0.83	0.83	0.63	0.63	0.63	0.57	0.57	0.57
Percent Heavy Veh, %	2	2	2	2	2	2	1	1	1	0	0	0
Cap, veh/h	55	863	30	66	832	37	187	69	64	187	74	45
Arrive On Green	1.00	1.00	1.00	0.40	0.40	0.40	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	24	1433	50	41	1382	61	568	309	287	562	329	201
Grp Volume(v), veh/h	571	0	0	560	0	0	227	0	0	163	0	0
Grp Sat Flow(s),veh/h/ln	1507	0	0	1484	0	0	1164	0	0	1092	0	0
Q Serve(g_s), s	0.0	0.0	0.0	1.5	0.0	0.0	4.8	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	26.7	0.0	0.0	17.3	0.0	0.0	12.5	0.0	0.0
Prop In Lane	0.04		0.03	0.05		0.04	0.54		0.25	0.57		0.18
Lane Grp Cap(c), veh/h	948	0	0	935	0	0	321	0	0	306	0	0
V/C Ratio(X)	0.60	0.00	0.00	0.60	0.00	0.00	0.71	0.00	0.00	0.53	0.00	0.00
Avail Cap(c_a), veh/h	948	0	0	935	0	0	441	0	0	425	0	0
HCM Platoon Ratio	2.00	2.00	2.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.53	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	18.8	0.0	0.0	34.3	0.0	0.0	32.3	0.0	0.0
Incr Delay (d2), s/veh	1.5	0.0	0.0	2.8	0.0	0.0	3.2	0.0	0.0	1.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.0	12.0	0.0	0.0	5.8	0.0	0.0	3.9	0.0	0.0
LnGrp Delay(d),s/veh	1.5	0.0	0.0	21.7	0.0	0.0	37.5	0.0	0.0	33.8	0.0	0.0
LnGrp LOS	A			C			D			C		
Approach Vol, veh/h		571			560			227			163	
Approach Delay, s/veh		1.5			21.7			37.5			33.8	
Approach LOS		A			C			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		63.4		28.6		63.4		28.6				
Change Period (Y+Rc), s		8.0		8.0		8.0		8.0				
Max Green Setting (Gmax), s		46.0		30.0		46.0		30.0				
Max Q Clear Time (g_c+l1), s		2.0		14.5		28.7		19.3				
Green Ext Time (p_c), s		6.5		1.5		5.3		1.3				
Intersection Summary												
HCM 2010 Ctrl Delay				17.8								
HCM 2010 LOS				B								

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	25	509	54	67	465	66	0	0	3	0	0	0
Conflicting Peds, #/hr	0	0	0	20	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, %	-	1	-	-	1	-	-	1	-	-	1	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	0	0	0	0	0	0
Mvmt Flow	28	566	60	74	517	73	0	0	3	0	0	0
Major/Minor	Major1			Major2			Minor1					
Conflicting Flow All	590	0	0	626	0	0	1353	1390	616			
Stage 1	-	-	-	-	-	-	651	651	-			
Stage 2	-	-	-	-	-	-	702	739	-			
Critical Hdwy	4.12	-	-	4.12	-	-	6.6	6.7	6.3			
Critical Hdwy Stg 1	-	-	-	-	-	-	5.6	5.7	-			
Critical Hdwy Stg 2	-	-	-	-	-	-	5.6	5.7	-			
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.5	4	3.3			
Pot Cap-1 Maneuver	985	-	-	956	-	-	155	133	486			
Stage 1	-	-	-	-	-	-	504	451	-			
Stage 2	-	-	-	-	-	-	476	409	-			
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	985	-	-	937	-	-	131	0	477			
Mov Cap-2 Maneuver	-	-	-	-	-	-	131	0	-			
Stage 1	-	-	-	-	-	-	482	0	-			
Stage 2	-	-	-	-	-	-	419	0	-			
Approach	EB			WB			NB					
HCM Control Delay, s	0.4			1			12.6					
HCM LOS							B					
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR					
Capacity (veh/h)	477	985	-	-	937	-	-					
HCM Lane V/C Ratio	0.007	0.028	-	-	0.079	-	-					
HCM Control Delay (s)	12.6	8.8	0	-	9.2	0	-					
HCM Lane LOS	B	A	A	-	A	A	-					
HCM 95th %tile Q(veh)	0	0.1	-	-	0.3	-	-					

HCM 2010 Signalized Intersection Summary
5: 8th Ave (SR 1007)/8th Ave & Main Street (SR 322)

Design Year 2035 with Connection PM

6/27/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	5	347	160	97	336	6	245	55	135	31	80	17
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	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
Adj Sat Flow, veh/h/ln	1727	1710	1710	1676	1676	1693	1719	1719	1719	1761	1761	1761
Adj Flow Rate, veh/h	5	369	170	105	365	7	278	62	153	42	110	23
Adj No. of Lanes	0	1	1	1	1	0	0	1	1	0	1	0
Peak Hour Factor	0.94	0.94	0.94	0.92	0.92	0.92	0.88	0.88	0.88	0.73	0.73	0.73
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	0	0	0
Cap, veh/h	42	610	518	271	588	11	261	42	677	49	103	16
Arrive On Green	0.72	0.72	0.72	0.72	0.72	0.72	0.47	0.47	0.47	0.47	0.47	0.47
Sat Flow, veh/h	5	1700	1443	776	1639	31	406	91	1448	0	219	33
Grp Volume(v), veh/h	374	0	170	105	0	372	340	0	153	175	0	0
Grp Sat Flow(s),veh/h/ln	1705	0	1443	776	0	1670	497	0	1448	253	0	0
Q Serve(g_s), s	0.0	0.0	4.0	8.6	0.0	10.4	0.0	0.0	5.8	0.0	0.0	0.0
Cycle Q Clear(g_c), s	10.1	0.0	4.0	18.7	0.0	10.4	43.0	0.0	5.8	43.0	0.0	0.0
Prop In Lane	0.01		1.00	1.00		0.02	0.82		1.00	0.24		0.13
Lane Grp Cap(c), veh/h	651	0	518	271	0	599	303	0	677	167	0	0
V/C Ratio(X)	0.57	0.00	0.33	0.39	0.00	0.62	1.12	0.00	0.23	1.05	0.00	0.00
Avail Cap(c_a), veh/h	651	0	518	271	0	599	303	0	677	167	0	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.90	0.00	0.90	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	9.8	0.0	8.9	14.5	0.0	9.8	29.5	0.0	14.6	27.7	0.0	0.0
Incr Delay (d2), s/veh	3.7	0.0	1.7	3.7	0.0	4.3	88.4	0.0	0.2	83.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	0.0	1.8	2.1	0.0	5.3	15.1	0.0	2.3	6.9	0.0	0.0
LnGrp Delay(d),s/veh	13.4	0.0	10.6	18.2	0.0	14.1	118.0	0.0	14.8	111.4	0.0	0.0
LnGrp LOS	B		B	B		B	F		B	F		
Approach Vol, veh/h		544			477			493			175	
Approach Delay, s/veh		12.5			15.0			86.0			111.4	
Approach LOS		B			B			F			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		41.0		51.0		41.0		51.0				
Change Period (Y+Rc), s		8.0		8.0		8.0		8.0				
Max Green Setting (Gmax), s		33.0		43.0		33.0		43.0				
Max Q Clear Time (g_c+l1), s		12.1		45.0		20.7		45.0				
Green Ext Time (p_c), s		5.1		0.0		4.1		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			44.9									
HCM 2010 LOS			D									

HCM 2010 Signalized Intersection Summary
6: 9th Ave & Main Street (SR 322)

Design Year 2035 with Connection PM

6/27/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	23	470	21	0	422	56	17	30	32	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.95			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1626	1693	1727	0	1644	1693	1805	1770	1770			
Adj Flow Rate, veh/h	25	505	23	0	469	62	27	47	50			
Adj No. of Lanes	1	1	0	0	1	0	0	1	1			
Peak Hour Factor	0.93	0.93	0.93	0.90	0.90	0.90	0.64	0.64	0.64			
Percent Heavy Veh, %	2	2	2	0	3	3	2	2	2			
Cap, veh/h	554	1208	55	0	1066	141	47	82	107			
Arrive On Green	1.00	1.00	1.00	0.00	0.75	0.75	0.07	0.07	0.07			
Sat Flow, veh/h	756	1606	73	0	1418	187	634	1104	1433			
Grp Volume(v), veh/h	25	0	528	0	0	531	74	0	50			
Grp Sat Flow(s),veh/h/ln	756	0	1680	0	0	1605	1738	0	1433			
Q Serve(g_s), s	0.5	0.0	0.0	0.0	0.0	11.3	3.8	0.0	3.1			
Cycle Q Clear(g_c), s	11.8	0.0	0.0	0.0	0.0	11.3	3.8	0.0	3.1			
Prop In Lane	1.00		0.04	0.00		0.12	0.36		1.00			
Lane Grp Cap(c), veh/h	554	0	1263	0	0	1207	129	0	107			
V/C Ratio(X)	0.05	0.00	0.42	0.00	0.00	0.44	0.57	0.00	0.47			
Avail Cap(c_a), veh/h	554	0	1263	0	0	1207	359	0	296			
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.90	0.00	0.90	0.00	0.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	1.0	0.0	0.0	0.0	0.0	4.2	41.2	0.0	40.8			
Incr Delay (d2), s/veh	0.1	0.0	0.9	0.0	0.0	1.2	4.0	0.0	3.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.3	0.0	0.0	5.3	2.0	0.0	1.3			
LnGrp Delay(d),s/veh	1.1	0.0	0.9	0.0	0.0	5.4	45.1	0.0	44.0			
LnGrp LOS	A		A			A	D		D			
Approach Vol, veh/h		553			531			124				
Approach Delay, s/veh		0.9			5.4			44.7				
Approach LOS		A			A			D				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		77.2				77.2		14.8				
Change Period (Y+Rc), s		8.0				8.0		8.0				
Max Green Setting (Gmax), s		57.0				57.0		19.0				
Max Q Clear Time (g_c+l1), s		13.8				13.3		5.8				
Green Ext Time (p_c), s		3.3				3.3		0.3				
Intersection Summary												
HCM 2010 Ctrl Delay			7.4									
HCM 2010 LOS			A									

HCM 2010 Signalized Intersection Summary
7: 5th Ave (SR 68) & South Street

Design Year 2035 with Connection PM

6/27/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	4	56	71	184	76	16	57	394	41	9	230	3
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.99	0.99		0.99	0.99		0.99	0.99		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1919	1855	1919	1881	1848	1881	1881	1832	1881	1948	1929	1948
Adj Flow Rate, veh/h	4	78	113	245	104	25	77	469	60	13	256	4
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	1.00	0.72	0.63	0.75	0.73	0.63	0.74	0.84	0.68	0.67	0.90	0.75
Percent Heavy Veh, %	0	0	0	1	1	1	0	3	3	0	1	1
Cap, veh/h	76	236	330	425	153	33	393	684	88	317	502	8
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.05	0.43	0.43	0.27	0.27	0.27
Sat Flow, veh/h	8	692	965	899	447	96	1791	1591	204	905	1893	30
Grp Volume(v), veh/h	195	0	0	374	0	0	77	0	529	13	0	260
Grp Sat Flow(s),veh/h/ln	1665	0	0	1442	0	0	1791	0	1794	905	0	1923
Q Serve(g_s), s	0.0	0.0	0.0	6.5	0.0	0.0	1.5	0.0	12.0	0.6	0.0	5.8
Cycle Q Clear(g_c), s	4.4	0.0	0.0	10.9	0.0	0.0	1.5	0.0	12.0	4.3	0.0	5.8
Prop In Lane	0.02		0.58	0.66		0.07	1.00		0.11	1.00		0.02
Lane Grp Cap(c), veh/h	642	0	0	611	0	0	393	0	772	317	0	510
V/C Ratio(X)	0.30	0.00	0.00	0.61	0.00	0.00	0.20	0.00	0.69	0.04	0.00	0.51
Avail Cap(c_a), veh/h	1603	0	0	1381	0	0	489	0	1585	679	0	1279
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.4	0.0	0.0	14.2	0.0	0.0	11.7	0.0	11.6	16.7	0.0	15.7
Incr Delay (d2), s/veh	0.4	0.0	0.0	1.4	0.0	0.0	0.3	0.0	1.5	0.1	0.0	1.1
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	2.1	0.0	0.0	4.7	0.0	0.0	0.7	0.0	6.2	0.2	0.0	3.2
LnGrp Delay(d),s/veh	12.7	0.0	0.0	15.6	0.0	0.0	12.1	0.0	13.1	16.8	0.0	16.9
LnGrp LOS	B			B			B		B	B		B
Approach Vol, veh/h		195			374			606			273	
Approach Delay, s/veh		12.7			15.6			13.0			16.8	
Approach LOS		B			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		27.7		22.7	8.3	19.4		22.7				
Change Period (Y+Rc), s		6.0		5.5	6.0	6.0		5.5				
Max Green Setting (Gmax), s		44.5		46.5	5.0	33.5		46.5				
Max Q Clear Time (g_c+I1), s		14.0		6.4	3.5	7.8		12.9				
Green Ext Time (p_c), s		5.7		4.3	0.0	5.5		4.2				
Intersection Summary												
HCM 2010 Ctrl Delay			14.4									
HCM 2010 LOS			B									

Intersection						
Int Delay, s/veh	4.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	55	131	84	451	257	51
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	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-2	2	-
Peak Hour Factor	90	90	90	82	83	90
Heavy Vehicles, %	2	2	2	3	2	2
Mvmt Flow	61	146	93	550	310	57
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1075	338	366	0	-	0
Stage 1	338	-	-	-	-	-
Stage 2	737	-	-	-	-	-
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	243	704	1193	-	-	-
Stage 1	722	-	-	-	-	-
Stage 2	473	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	224	704	1193	-	-	-
Mov Cap-2 Maneuver	224	-	-	-	-	-
Stage 1	722	-	-	-	-	-
Stage 2	436	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	20.8	1.2		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1193	-	431	-	-	
HCM Lane V/C Ratio	0.078	-	0.48	-	-	
HCM Control Delay (s)	8.3	-	20.8	-	-	
HCM Lane LOS	A	-	C	-	-	
HCM 95th %tile Q(veh)	0.3	-	2.5	-	-	

HCM 2010 Signalized Intersection Summary
8: Route 68 & Clarion Mall Drive/Kane Drive

Design Year 2035 with Connection PM

6/27/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	104	7	91	20	7	26	48	405	10	26	442	24
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1996	1996	1919	1996	1958	1996	1844	1828	1881	1845	1883	1919
Adj Flow Rate, veh/h	124	16	0	28	16	40	60	488	16	32	526	0
Adj No. of Lanes	0	1	1	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.84	0.44	0.88	0.71	0.44	0.65	0.80	0.83	0.63	0.81	0.84	0.75
Percent Heavy Veh, %	0	0	4	0	0	0	2	3	3	4	2	2
Cap, veh/h	215	20	182	91	58	96	632	1388	46	680	1311	0
Arrive On Green	0.11	0.11	0.00	0.11	0.11	0.11	0.08	1.00	1.00	0.70	0.70	0.00
Sat Flow, veh/h	1372	177	1631	427	523	863	1756	1760	58	883	1883	0
Grp Volume(v), veh/h	140	0	0	84	0	0	60	0	504	32	526	0
Grp Sat Flow(s),veh/h/ln	1549	0	1631	1813	0	0	1756	0	1818	883	1883	0
Q Serve(g_s), s	4.9	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.3	13.0	0.0
Cycle Q Clear(g_c), s	9.6	0.0	0.0	4.7	0.0	0.0	1.0	0.0	0.0	1.3	13.0	0.0
Prop In Lane	0.89		1.00	0.33		0.48	1.00		0.03	1.00		0.00
Lane Grp Cap(c), veh/h	234	0	182	246	0	0	632	0	1433	680	1311	0
V/C Ratio(X)	0.60	0.00	0.00	0.34	0.00	0.00	0.09	0.00	0.35	0.05	0.40	0.00
Avail Cap(c_a), veh/h	393	0	356	420	0	0	677	0	1433	680	1311	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.93	0.00	0.93	1.00	1.00	0.00
Uniform Delay (d), s/veh	47.6	0.0	0.0	45.5	0.0	0.0	4.4	0.0	0.0	5.3	7.1	0.0
Incr Delay (d2), s/veh	2.4	0.0	0.0	0.8	0.0	0.0	0.1	0.0	0.6	0.1	0.9	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	4.3	0.0	0.0	2.4	0.0	0.0	0.4	0.0	0.3	0.3	7.1	0.0
LnGrp Delay(d),s/veh	50.0	0.0	0.0	46.4	0.0	0.0	4.5	0.0	0.6	5.4	8.0	0.0
LnGrp LOS	D			D			A		A	A	A	
Approach Vol, veh/h		140			84			564			558	
Approach Delay, s/veh		50.0			46.4			1.0			7.8	
Approach LOS		D			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		92.7		17.3	10.2	82.5		17.3				
Change Period (Y+Rc), s		6.0		5.0	6.0	6.0		5.0				
Max Green Setting (Gmax), s		75.0		24.0	7.0	62.0		24.0				
Max Q Clear Time (g_c+I1), s		2.0		11.6	3.0	15.0		6.7				
Green Ext Time (p_c), s		46.0		0.7	0.0	34.0		0.8				
Intersection Summary												
HCM 2010 Ctrl Delay			11.8									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary
9: Route 68 & Perkins Drive/Commerical Drive

Design Year 2035 with Connection PM

6/27/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	191	26	314	67	21	2	164	272	10	39	325	174
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1919	1902	1919	1900	1871	1900	1809	1846	1881	1828	1881	1919
Adj Flow Rate, veh/h	236	36	357	124	32	4	176	344	24	48	401	202
Adj No. of Lanes	0	1	1	0	1	0	1	1	0	1	1	1
Peak Hour Factor	0.81	0.72	0.88	0.54	0.66	0.50	0.93	0.79	0.42	0.81	0.81	0.86
Percent Heavy Veh, %	0	0	0	0	0	0	4	2	2	5	2	0
Cap, veh/h	471	63	706	198	46	5	207	849	59	61	776	673
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.12	0.50	0.50	0.01	0.14	0.14
Sat Flow, veh/h	1312	200	1631	446	146	15	1723	1706	119	1741	1881	1631
Grp Volume(v), veh/h	272	0	357	160	0	0	176	0	368	48	401	202
Grp Sat Flow(s),veh/h/ln	1512	0	1631	607	0	0	1723	0	1825	1741	1881	1631
Q Serve(g_s), s	0.0	0.0	17.5	14.4	0.0	0.0	11.0	0.0	14.0	3.0	21.8	12.3
Cycle Q Clear(g_c), s	16.5	0.0	17.5	30.9	0.0	0.0	11.0	0.0	14.0	3.0	21.8	12.3
Prop In Lane	0.87		1.00	0.77		0.02	1.00		0.07	1.00		1.00
Lane Grp Cap(c), veh/h	534	0	706	248	0	0	207	0	908	61	776	673
V/C Ratio(X)	0.51	0.00	0.51	0.65	0.00	0.00	0.85	0.00	0.41	0.78	0.52	0.30
Avail Cap(c_a), veh/h	568	0	745	274	0	0	313	0	908	111	776	673
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	0.90	0.90	0.90
Uniform Delay (d), s/veh	31.7	0.0	22.6	43.2	0.0	0.0	47.4	0.0	17.4	53.9	37.3	33.2
Incr Delay (d2), s/veh	0.8	0.0	0.6	4.5	0.0	0.0	12.8	0.0	1.3	17.4	2.2	1.0
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	7.0	0.0	8.0	5.0	0.0	0.0	6.0	0.0	7.4	1.8	11.9	5.7
LnGrp Delay(d),s/veh	32.4	0.0	23.2	47.6	0.0	0.0	60.2	0.0	18.7	71.3	39.5	34.2
LnGrp LOS	C		C	D			E		B	E	D	C
Approach Vol, veh/h		629			160			544			651	
Approach Delay, s/veh		27.2			47.6			32.2			40.2	
Approach LOS		C			D			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.9	60.7		39.4	19.2	51.4		39.4				
Change Period (Y+Rc), s	6.0	6.0		5.0	6.0	6.0		5.0				
Max Green Setting (Gmax), s	7.0	49.0		37.0	20.0	36.0		37.0				
Max Q Clear Time (g_c+l1), s	5.0	16.0		19.5	13.0	23.8		32.9				
Green Ext Time (p_c), s	0.0	16.6		3.4	0.3	8.3		1.5				
Intersection Summary												
HCM 2010 Ctrl Delay			34.5									
HCM 2010 LOS			C									