PRINCIPAL
Engineering, Inc.

1011 N Causeway Blvd, Suite 19 ♦ Mandeville, Louisiana 70471 ♦ Phone: 985.624.5001 ♦ Fax: 985.624.5303

November 14, 2016

City of Mandeville
Dept. of Planning and Development
Attn: Louisette Scott, Director
3100 East Causeway Approach
Mandeville, LA 70448

Subject: Doctors Chiropractic Group Driveway Request

Dear Ms. Scott,

At the request of your office, documents in support of a connection between the existing parking lot at the subject commercial establishment (fronting W. Causeway Approach) and Garden Ave. were reviewed. Documents consisted of 1) a Traffic Impact Analysis prepared by GEC, dated October 2016, 2) a sketch of the proposed connection, 3) the original approved plan by Holly & Smith Architects dated Sept. 1994, and 4) an email from your office reporting comments from Beau Rivage residents.

Comments are listed below.

1. The GEC TIA demonstrating unaltered levels of service appears correct. On a strict LOS basis, there is no impact as result of the addition during the AM & PM peaks.
2. If the request is granted, I suggest discouraging inbound traffic by skewing the driveway toward W. Causeway Approach, and adding curbing around a raised plant bed so that any inbound vehicle would have to mount the curb and cross the bed.
3. While LOS is acceptable, the Commission may wish to evaluate general access management and aesthetic criteria.
    a. Commercial driveways are present on the other side of the Garden Ave boulevard section.
        i. Are these existing driveways problematic?
        ii. Is the proposed driveway consistent with use of Garden Ave on the other side of the median?
    b. The proposed driveway would be near Beau Rivage Dr. intersection with Garden Ave.
        i. Residential driveways are present in this configuration elsewhere in the subdivision. Is that condition undesirable? Is this commercial driveway subject to different criteria from the residential driveways?
        ii. Is the proposed commercial driveway aesthetically acceptable?
4. The 2014 concerns are reproduced below, and annotated with my comment.
    - *"vehicles traveling the wrong way toward Heavens Road,"* Possible, but unlikely if driveway is constructed to discourage.
    - "*angling the driveway to force the traffic toward West Causeway Approach would cause cars and delivery trucks difficulty in maneuvering the turn and could destroy the landscaping and sprinkler heads,"* Possibly, but the drive can likely be designed to avoid this, and trucks may be prohibited if necessary.

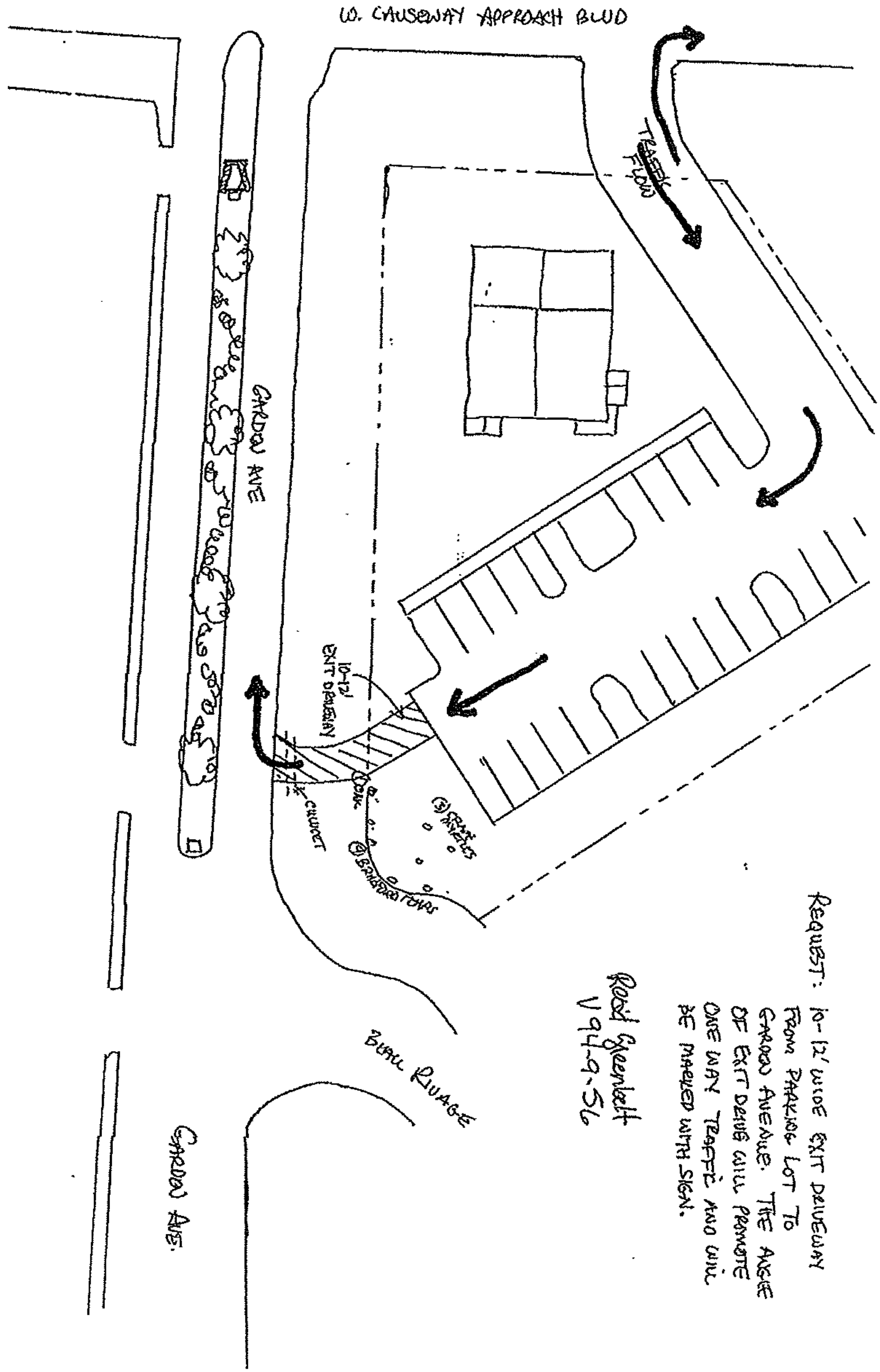
- *"possibility of traffic using the driveway as a short cut onto West Causeway Approach,"* Unlikely if driveway is constructed to discourage such a movement.
- *"this was not a business thoroughfare and the neighborhood should retain local traffic,"* This is outside the scope of this letter.
- *"Garden Avenue currently receives increased traffic because it is used as a cut through to Heavens Drive and other subdivisions to the south and the west."* Correct. However, additive volumes from the driveway will be insignificant.

5. In the materials reviewed, no discussion was made of the underlying motivation for the connection. If improved function of the parking lot is the goal of driveway addition, perhaps contained "on site" improvements could be constructed; however, without more detailed study and lacking clear definition of the problem, that is unknown to this reviewer.

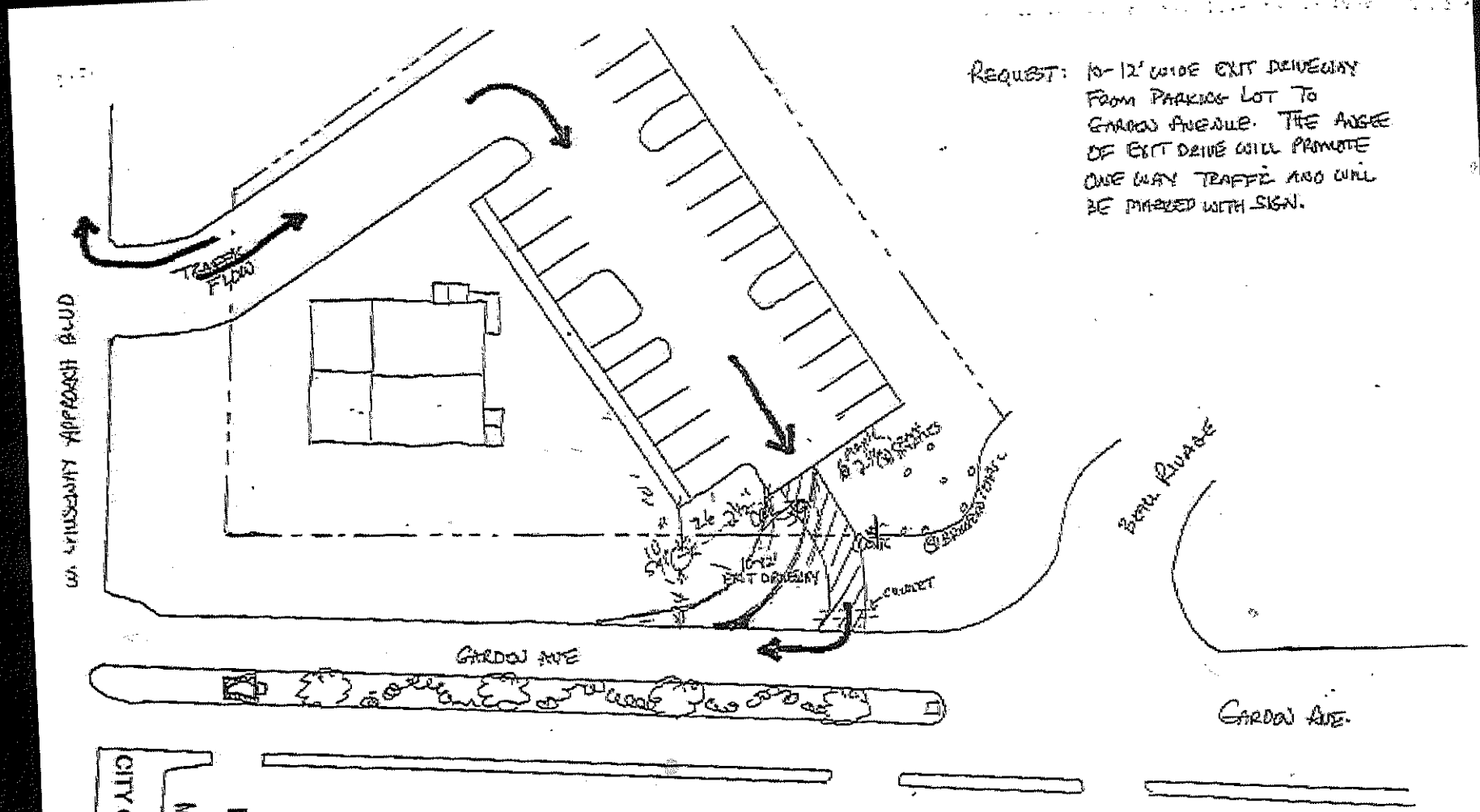
Please let us know if you have any questions or concerns by contacting us at 985.624.5001.

Sincerely,
PRINCIPAL *Engineering, Inc.*

Andre C. Monnot, P.E.
Vice President


W. CAUSEWAY APPROACH BLVD
TRAFFIC FLOW
GARDEN AVE
10-12' EXIT DRIVEWAY
CULVERT
OAK
(3) CRAPE MYRTLES
(3) BRADFORD PEARS
BEAU RIVAGE
GARDEN AVE.
REQUEST: 10-12' WIDE EXIT DRIVEWAY FROM PARKING LOT TO GARDEN AVENUE. THE ANGLE OF EXIT DRIVE WILL PROMOTE ONE WAY TRAFFIC AND WILL BE MARKED WITH SIGN.
V94-9-56

2014 CULVERT PERMIT - GARDEN AVE DRIVEWAY



RECEIVED
MAY - 8 2014
CITY OF MANDEVILLE

Traffic Impact Analysis for:

Doctors Chiropractic Group

Mandeville, Louisiana

October, 2016

Prepared by:

GEC
Civil Engineers & Consultants

8282 Goodwood Blvd
Baton Rouge, LA 70806

STATE OF LOUISIANA
THOMAS R. SWANSON
License No. 30139
PROFESSIONAL ENGINEER
IN
ENGINEERING
10/6/2016

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TRIP GENERATION, v8, by TRAFFICWARE

SYNCHRO BY TRAFFICWARE, VERSION 8, 2013

HIGHWAY CAPACITY MANUAL, TRANSPORTATION RESEARCH BOARD, SPECIAL REPORT 209, WASHINGTON, D.C., 2000.

EXECUTIVE SUMMARY

OVERVIEW

The purpose of this report is to analyze the traffic impact of a proposed driveway into a Doctors' office from a Garden Ave. into the office parking lot in Mandeville, LA.

The only major intersection that the proposed driveway will have a significant impact on is the intersection of West Causeway Approach southbound and Garden Ave.

CONCLUSIONS AND RECOMMENDATIONS

Analysis conducted for the intersection of West Causeway Approach southbound and Garden Ave. showed that the addition of the driveway will have a minimal impact on the surrounding roadway network. No additional roadway or intersection improvements are deemed necessary.

I. INTRODUCTION

The purpose of this report is to analyze the traffic impact of a proposed driveway into a Doctors' office from a Garden Ave. into the office parking lot in Mandeville, LA.

The objectives of this study are as follows:

- To adequately assess the traffic impacts associated with the proposed development and identify the level of off-site access and traffic control improvements required to service the project;
- To provide public agencies with a comprehensive study which evaluates and documents the traffic impacts and off-site improvements, where warranted;
- To provide a technically sound basis to identify potential impacts and related mitigation requirements in response to off-site traffic impacts;
- To provide the Site Engineer necessary input on the proposed access plan.

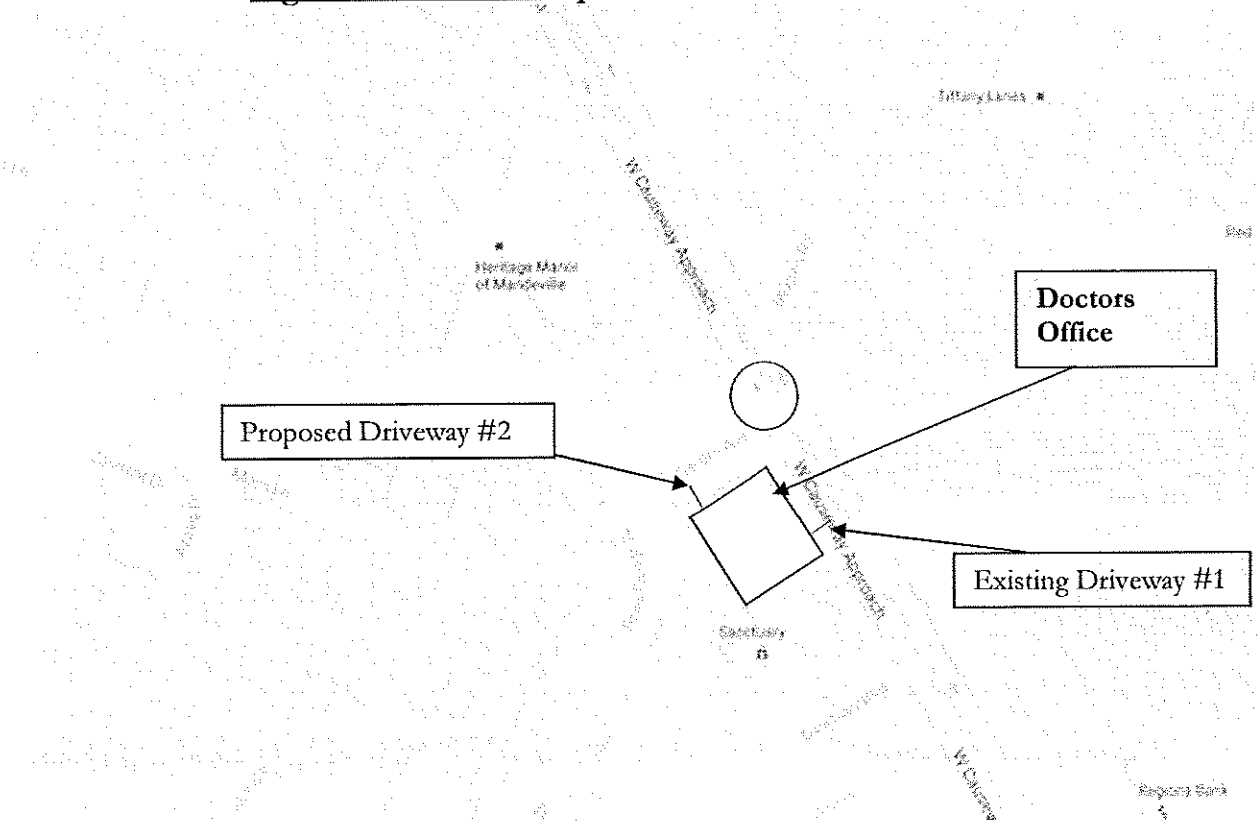
In an effort to define traffic impact, this analysis determines the extent of existing traffic conditions, projects background traffic flow including area growth, and projects changes in traffic flow due to operation of the proposed driveway.

II. PROJECT LOCATION AND STUDY AREA

The Group office is in a corner lot at the intersection of West Causeway Approach southbound and Garden Ave in Mandeville, LA. There is a proposed driveway into the facility from Garden Ave. into the office parking lot. Currently, access/egress is available via one entrance/exit driveway on West Causeway Approach on the northeast side of the property. This access is a right-out only driveway. **Figure 1** illustrates the project location and the studied intersection(s).

The only major intersection that the proposed driveway will have a significant impact on is the intersection of West Causeway Approach southbound and Garden Ave.

Figure 1: Location Map with Studied Intersections



III. EXISTING TRAFFIC CONDITIONS

Peak Intervals for Analysis

Given the functional characteristics of the study area and the land use proposed for the site, the peak hours selected for analysis are ordinarily weekday AM and PM peak periods due to commuter traffic. The combination of site traffic and adjacent thru traffic produces the greatest demand during these time periods. This office is open during the AM peak for a couple days a week, so the morning peak is included.

Existing Traffic Volume Data

Traffic turning movement volumes were obtained on September 7, 2016. An illustration of these volumes can be found in **Figure 2**.

Roadway Network

At this location, the West Causeway Approach is a four-lane, two-way principal arterial with a 20' median that runs generally north-south at its intersection with Garden Ave. Speed limit is 45 mph on West Causeway Approach in the vicinity of this intersection. At this location, there is no access from Garden Ave to the northbound direction. Approximately 300 feet to the south there is a dedicated U-turn lane in the southbound direction with approximately 280 feet of storage.

Garden Ave. is a two lane, two way roadway with a 20' median near the intersection than runs generally east-west, with stop controls at West Causeway Approach. Due to the median on West Causeway Approach, only right turns are permitted from this approach. There is also a shared use path crossing Garden Ave. at the intersection.

Traffic volumes are highest in the morning in the southbound direction, presumably on their way to the causeway bridge. Volumes entering and exiting the parking lot are very low.

Area Growth

Due to modest growth projected for the area, G.E.C., Inc. applied a growth rate of 2.0% to determine projected growth (natural growth) traffic; **Figure 3** demonstrates the projected traffic volumes after 3 years with no additional development.

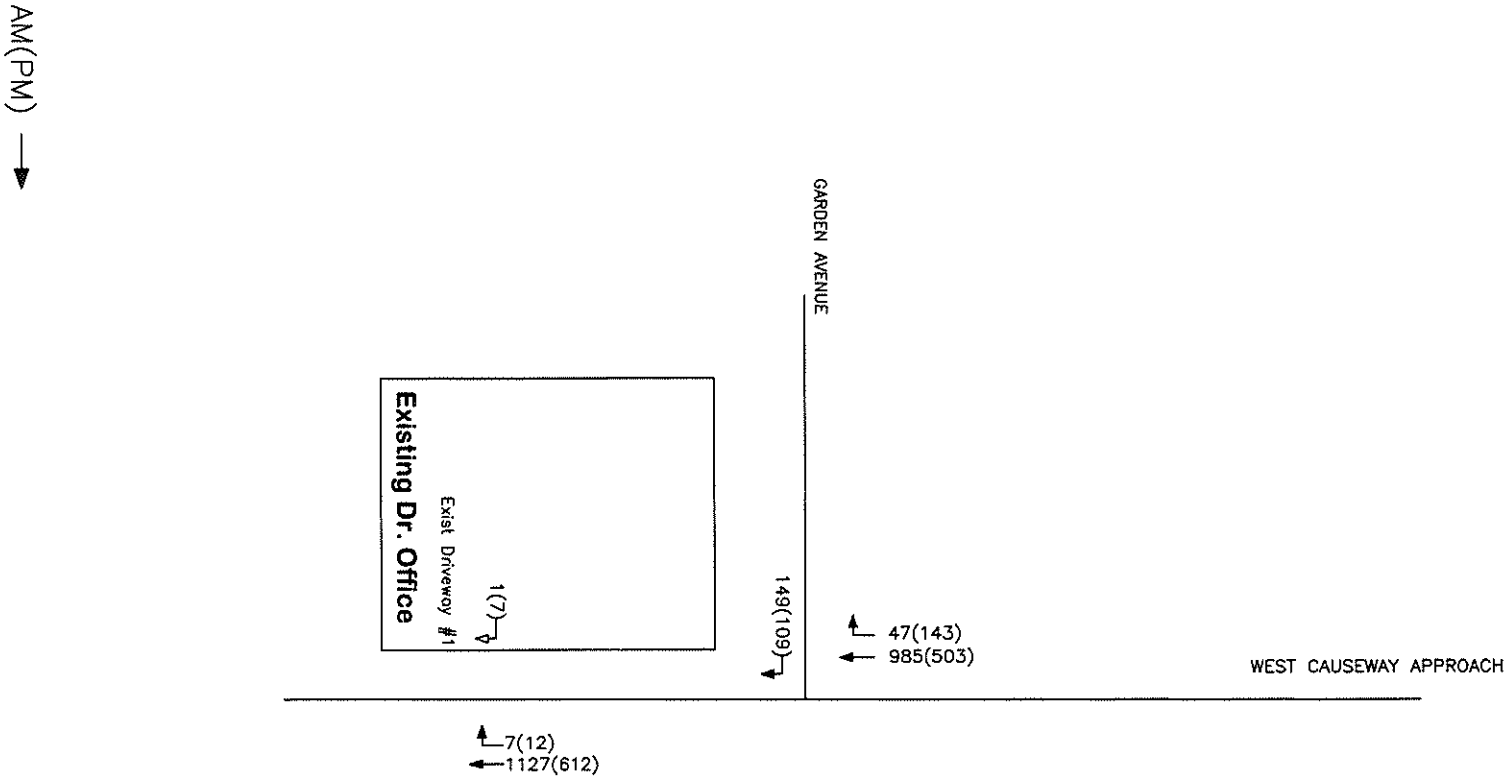


FIGURE 2

EXISTING PEAK HOUR VOLUMES

Doctors Chiropractic Group
Mandeville, LA

Gulf Engineers & Consultants

NOTE: N.T.S.

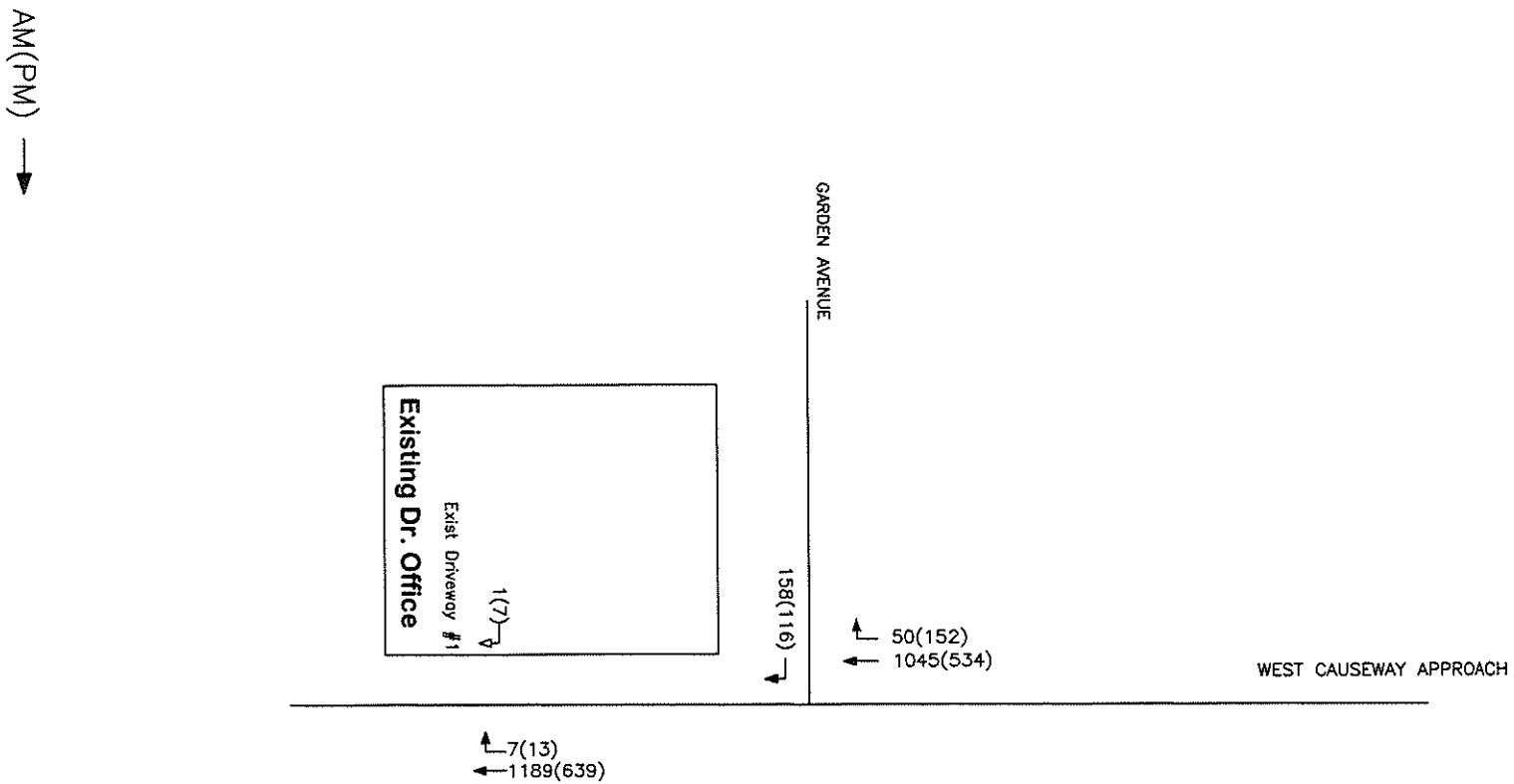


FIGURE 3

NATURAL GROWTH
PEAK HOUR VOLUMES

Doctors Chiropractic Group
Mandeville, LA

GEC
Gulf Engineers & Consultants

NOTE: N.T.S.

IV. TRIP GENERATION

Site Traffic Generation

There are no anticipated additional trips at this location, so the driveways will be expected to share the existing trips at the peak hours.

Table I below shows the entering and exiting volumes by the existing driveway at West Causeway Approach.

TABLE I – TRIP VOLUMES

LAND USE	AM PEAK		PM PEAK	
	ENTER	EXIT	ENTER	EXIT
Doctors Chiropractic Group	7	1	7	12

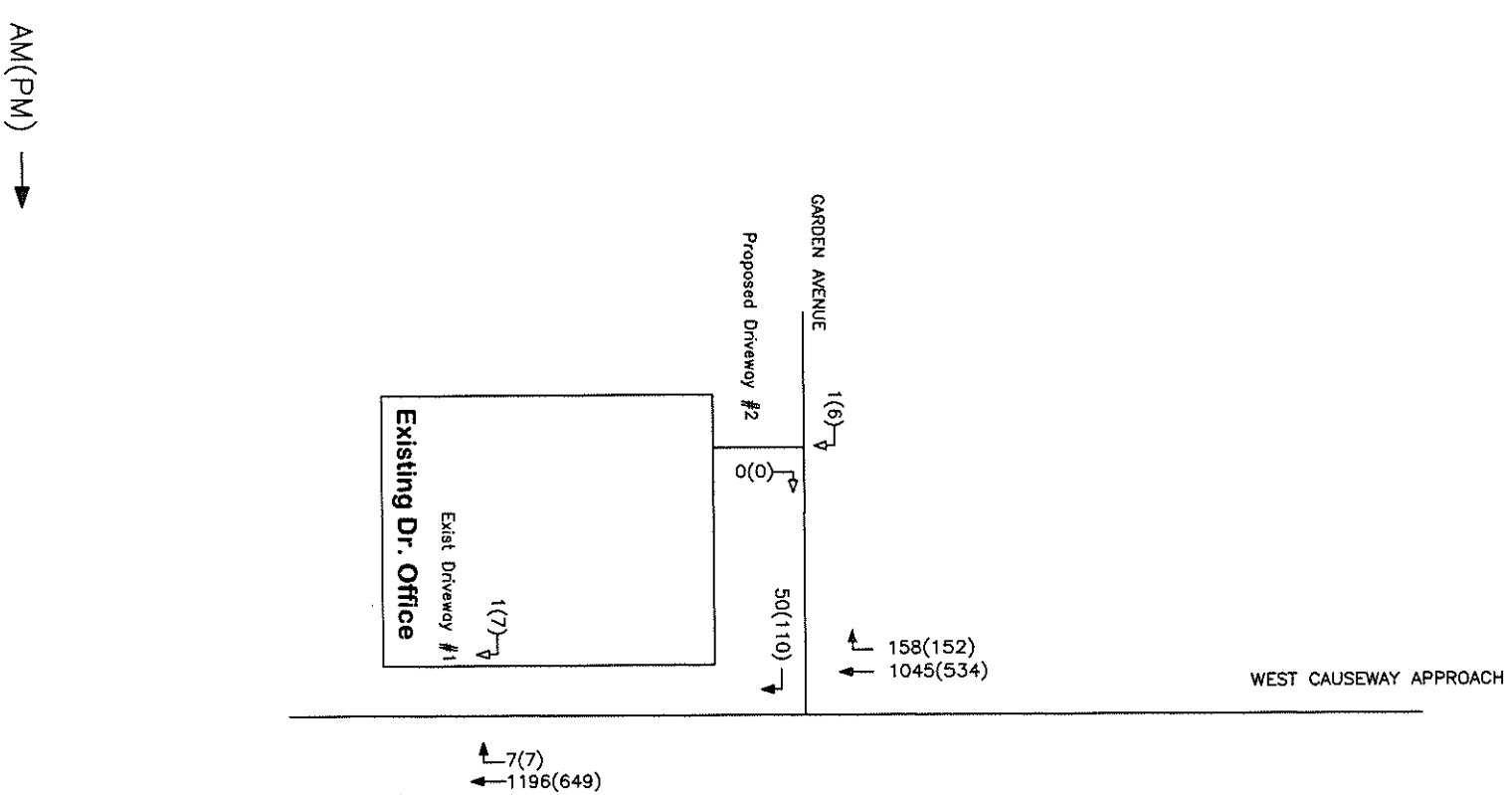
Site Traffic Distribution

The cumulative effect of site traffic on the transportation network is dependent on the origins and destinations of that traffic and the location of the access drives serving the site. The proposed arrival/departure distribution of traffic to be generated at this site is considered a function of several parameters, including the following:

- Travel patterns at the existing site
- Existing traffic conditions and controls
- Proposed site access drive locations
- Population centers in the area
- Existing highway network

Future Traffic Conditions

Figure 4 illustrates the projected driveway volumes split between the existing and the potential new driveway.



NOTE: N.T.S.

FIGURE 4

FULL DEVELOPMENT PEAK HOUR VOLUMES

Doctors Chiropractic Group
Mandeville, LA

Gulf Engineers & Consultants

V. CAPACITY ANALYSIS

The capacity of a highway system is predicated by two components: the capacity of the included roadway sections and the capacity of the affected intersections along the route. Intersecting roadways generally provide the initial constraint on a system's capacity. Efficiency at the intersections becomes the critical constraint for capacity. Vehicle interactions at these points must therefore be analyzed to assess the projected operation and capacity levels.

The standard procedure for capacity analysis of signalized and unsignalized intersections is outlined in the 2000 Highway Capacity Manual published by the Transportation Research Board. Synchro 8 was used in analyzing operating conditions at the study area intersections. The procedure yields a Level of Service (LOS) as an indicator of how well intersections operate.

The concept of Level of Service is defined as a qualitative measurement describing operating conditions within a traffic stream and their perception by motorists and/or passengers. Level of Service is defined in terms of delay which is a measure of driver discomfort, frustration, fuel consumption, and lost travel time.

Six Levels of Service, with corresponding levels of delay are defined for analysis. They are assigned letter designations, from "A" to "F", with LOS "A" representing the best conditions (little or no delay), LOS "C" average conditions and LOS "F" the worst (excessive delay).

Intersection Analysis Results

The projected traffic volumes, generated by the site and added to the background traffic volumes, are analyzed to assess the capacity potential of the access drives and study area intersections. **Table II** depicts LOS criteria for Two-Way-Stop-Control (TWSC) and All-Way-Stop-Control (AWSC) Intersections. **Table III** depicts LOS criteria for Signalized Intersections. Capacity results of the existing, background, and full development conditions are contained in **Table IV**. All capacity analysis calculations are included in the Appendix.

TABLE II – LEVEL OF SERVICE CRITERIA FOR TWO-WAY AND ALL-WAY STOP CONTROL INTERSECTIONS

Level of Service	Control Delay per Vehicle (sec)
A	≤ 10
B	>10 to ≤ 15
C	> 15 to ≤ 25
D	> 25 to ≤ 35
E	> 35 to ≤ 50
F	> 50

TABLE III – LEVEL OF SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS

Level of Service	Control Delay per Vehicle (sec)
A	≤ 10
B	>10 to ≤ 20
C	> 20 to ≤ 35
D	> 35 to ≤ 55
E	> 55 to ≤ 80
F	> 80

TABLE IV – CAPACITY ANALYSIS RESULTS

Intersection		Existing		Background		Full Development	
W. Causeway Approach at Garden Avenue		**AM**	**PM**	**AM**	**PM**	**AM**	**PM**
Westbound: Garden Avenue							
	Right Turn Movement	C (15.9 sec)	B (11.0 sec)	C (17.1 sec)	B (11.3 sec)	B (13.9 sec)	B (11.2 sec)
Southbound: W. Causeway Approach							
	Thru Movement	Free Flow	Free Flow	Free Flow	Free Flow	Free Flow	Free Flow
	Right Turn Movement	Free Flow	Free Flow	Free Flow	Free Flow	Free Flow	Free Flow
W. Causeway Approach at Driveway #1		**AM**	**PM**	**AM**	**PM**	**AM**	**PM**
Eastbound: Driveway #1							
	Right Turn Movement	B (13.3 sec)	B (10.5 sec)	B (13.8 sec)	B (10.7 sec)	B (13.8 sec)	B (10.7 sec)
Southbound: W. Causeway Approach							
	Thru Movement	Free Flow	Free Flow	Free Flow	Free Flow	Free Flow	Free Flow
	Right Turn Movement	A (0 sec)	A (0 sec)	A (0 sec)	A (0 sec)	A (0 sec)	A (0 sec)
Garden Avenue at Driveway #2		**AM**	**PM**	**AM**	**PM**	**AM**	**PM**
Eastbound: Garden Avenue							
	Thru Movement					Free	Free
	Right Turn Movement					Free	Free
Northbound: Driveway 1							
	Right Turn Movement					A (0 sec)	A (0 sec)

Discussion

The analyses of the intersections indicate that the addition of a driveway onto Garden Avenue will have little to no impact on the surrounding roadway network.

VI. CONCLUSIONS AND RECOMMENDATIONS

The purpose of this report is to analyze the traffic impact of a proposed driveway into a Doctors' office from a Garden Ave. into the office parking lot in Mandeville, LA.

The only major intersection that the proposed driveway will have a significant impact on is the intersection of West Causeway Approach southbound and Garden Ave.

The analyses of the intersections indicate that the addition of a driveway onto Garden Avenue will have little to no impact on the surrounding roadway network.

APPENDICES

APPENDIX A:

TRAFFIC VOLUME DATA

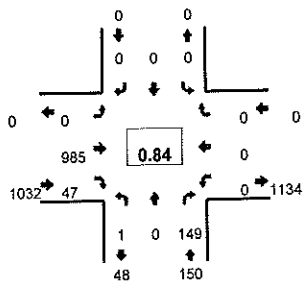
Type of peak hour being reported: Intersection Peak

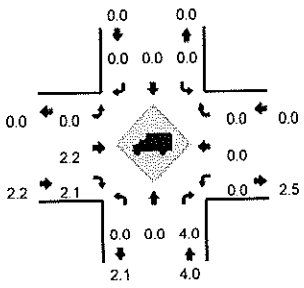
Method for determining peak hour: Total Entering Volume

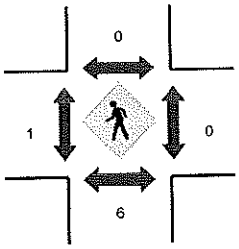
LOCATION: Garden Ave -- W Causeway Approach
CITY/STATE: Mandeville, LA

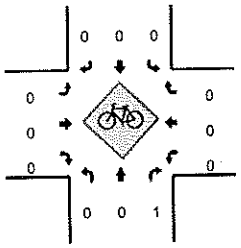
QC JOB #: 13811101
DATE: Wed, Sep 07 2016

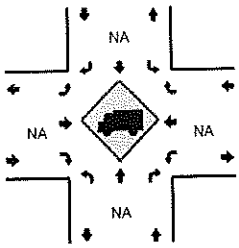
Peak-Hour: 7:00 AM -- 8:00 AM
Peak 15-Min: 7:00 AM -- 7:15 AM

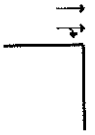


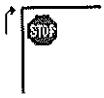


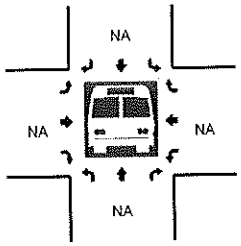












15-Min Count Period	Garden Ave (Northbound)				Garden Ave (Southbound)				W Causeway Approach (Eastbound)				W Causeway Approach (Westbound)				Total	Hourly Totals
Beginning At	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	53	1	0	0	0	0	0	287	11	0	0	0	0	0	352	
7:15 AM	0	0	36	0	0	0	0	0	0	276	11	0	0	0	0	0	323	
7:30 AM	0	0	21	0	0	0	0	0	0	201	11	0	0	0	0	0	233	
7:45 AM	0	0	39	0	0	0	0	0	0	221	14	0	0	0	0	0	274	1182
8:00 AM	0	0	43	0	0	0	0	0	0	208	12	0	0	0	0	0	263	1093
8:15 AM	0	0	28	0	0	0	0	0	0	193	23	0	0	0	0	0	244	1014
8:30 AM	0	0	29	0	0	0	0	0	0	193	20	0	0	0	0	0	242	1023
8:45 AM	0	0	15	0	0	0	0	0	0	171	19	0	0	0	0	0	205	954

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	212	4	0	0	0	0	0	1148	44	0	0	0	0	0	1408
Heavy Trucks	0	0	20		0	0	0		0	20	0		0	0	0		40
Pedestrians		8				0				4				0			12
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad Stopped Buses																	

Comments:

Report generated on 9/26/2016 8:59 AM

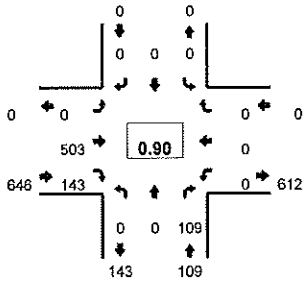
Type of peak hour being reported: Intersection Peak

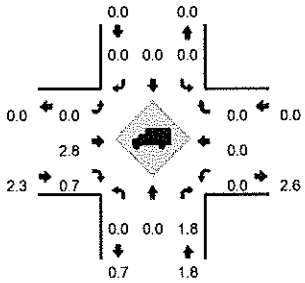
Method for determining peak hour: Total Entering Volume

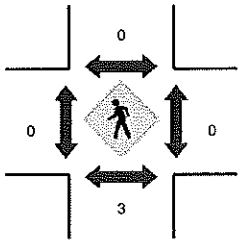
LOCATION: Garden Ave -- W Causeway Approach
CITY/STATE: Mandeville, LA

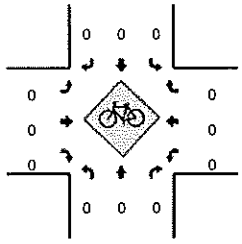
QC JOB #: 13811102
DATE: Wed, Sep 07 2016

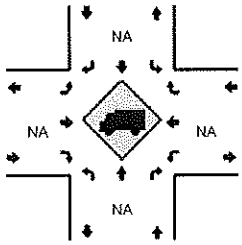
Peak-Hour: 4:45 PM -- 5:45 PM
Peak 15-Min: 5:30 PM -- 5:45 PM

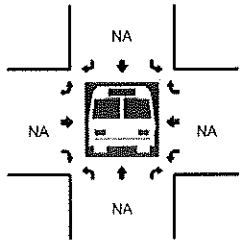












15-Min Count Period Beginning At	Garden Ave (Northbound)				Garden Ave (Southbound)				W Causeway Approach (Eastbound)				W Causeway Approach (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	24	0	0	0	0	0	0	83	30	0	0	0	0	0	137	
4:15 PM	0	0	19	0	0	0	0	0	0	111	28	0	0	0	0	0	158	
4:30 PM	0	0	26	0	0	0	0	0	0	117	32	0	0	0	0	0	175	
4:45 PM	0	0	26	0	0	0	0	0	0	121	25	0	0	0	0	0	172	642
5:00 PM	0	0	31	0	0	0	0	0	0	122	33	0	0	0	0	0	186	691
5:15 PM	0	0	16	0	0	0	0	0	0	131	41	0	0	0	0	0	188	721
5:30 PM	0	0	36	0	0	0	0	0	0	129	44	0	0	0	0	0	209	755
5:45 PM	0	0	20	1	0	0	0	0	0	109	40	0	0	0	0	0	170	753

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	144	0	0	0	0	0	0	516	176	0	0	0	0	0	836
Heavy Trucks	0	0	4		0	0	0		0	12	0		0	0	0		16
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad Stopped Buses																	

Comments:

Report generated on 9/26/2016 8:59 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

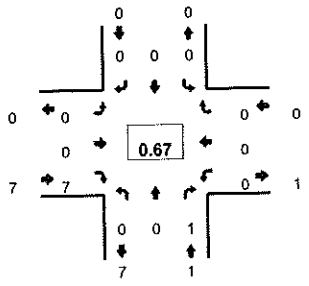
Type of peak hour being reported: Intersection Peak

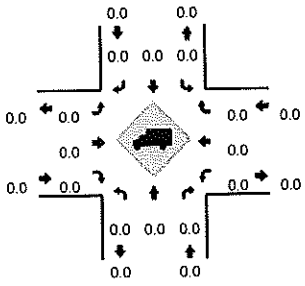
Method for determining peak hour: Total Entering Volume

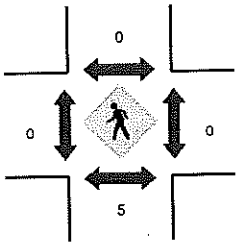
LOCATION: Office Dwy -- W Causeway Approach
CITY/STATE: Mandeville, LA

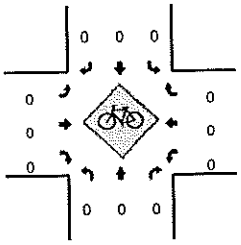
QC JOB #: 13811103
DATE: Wed, Sep 07 2016

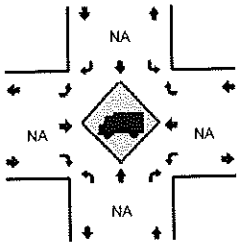
Peak-Hour: 8:00 AM -- 9:00 AM
Peak 15-Min: 8:30 AM -- 8:45 AM

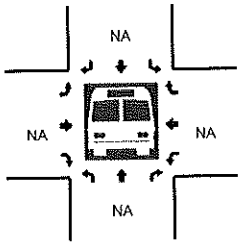












15-Min Count Period Beginning At	Office Dwy (Northbound)				Office Dwy (Southbound)				W Causeway Approach (Eastbound)				W Causeway Approach (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	3
8:30 AM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3	6
8:45 AM	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	3	8

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	0	0	0	0	0	0	12	0	0	0	0	0	12
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 9/26/2016 8:59 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

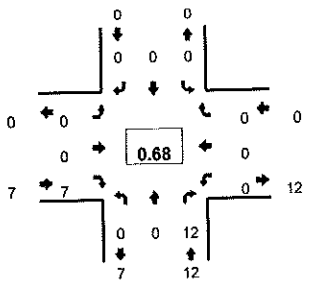
Type of peak hour being reported: Intersection Peak

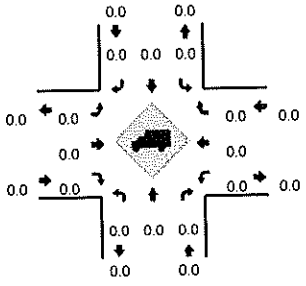
Method for determining peak hour: Total Entering Volume

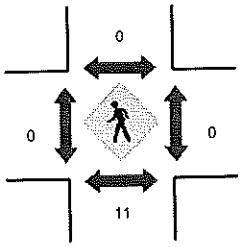
LOCATION: Office Dwy -- W Causeway Approach
CITY/STATE: Mandeville, LA

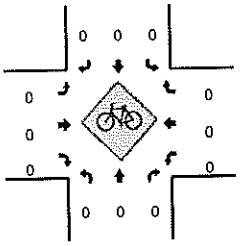
QC JOB #: 13811104
DATE: Wed, Sep 07 2016

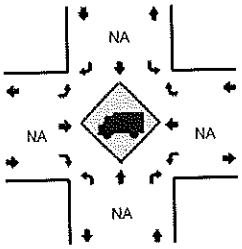
Peak-Hour: 4:00 PM -- 5:00 PM
Peak 15-Min: 4:00 PM -- 4:15 PM

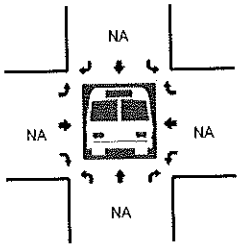












15-Min Count Period Beginning At	Office Dwy (Northbound)				Office Dwy (Southbound)				W Causeway Approach (Eastbound)				W Causeway Approach (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	5	0	0	0	0	0	0	0	2	0	0	0	0	0	7	
4:15 PM	0	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0	4	
4:30 PM	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	2	
4:45 PM	0	0	4	0	0	0	0	0	0	0	2	0	0	0	0	0	6	19
5:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	13
5:15 PM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	12
5:30 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	12
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	20	0	0	0	0	0	0	0	8	0	0	0	0	0	28
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0
Pedestrians		8				0				0				0			8
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad Stopped Buses																	

Comments:

Report generated on 9/26/2016 8:59 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

AM PEAK

LOCATION NUMBER	INTERSECTION DESCRIPTION	Existing Volume	Background Growth		Full Build Volumes
			Percent	2.00%	
			# of Years	3	
			1.0612		
		A	B		G
1	W. CASUSEWAY APPROACH AT GARDEN AVE.				
	ER	149	158		158
	ST	985	1045		1045
	SR	47	50		50
2	W. CASUSEWAY APPROACH AT DRIVEWAY #1				
	ER	1	1		1
	ST	1025	1196		1196
	SR	7	7		7
3	GARDEN AVE. AT DRIVEWAY #2				
	ER	0	0		1
	ET				49
	NR				0

PM PEAK

LOCATION NUMBER	INTERSECTION DESCRIPTION	Existing Volume	Background Growth		Full Build Volumes
			Percent	2.00%	
			# of Years	3	
			1.0612		
		A	B		C
1	W. CASUSEWAY APPROACH AT GARDEN AVE.				
	ER	109	116		116
	ST	503	534		534
	SR	143	152		152
2	W. CASUSEWAY APPROACH AT DRIVEWAY #1				
	ER	12	13		7
	ST	605	637		637
	SR	7	7		7
3	GARDEN AVE. AT DRIVEWAY #2				
	ET	0	0		0
	ER				6
	NR				0

APPENDIX B:

EXISTING VOLUME CALCULATIONS

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	149	0	0	985	47
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	-	-	-	200
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	162	0	0	1071	51

Major/Minor	Minor2		Major2	
Conflicting Flow All	1071	534	-	0
Stage 1	1071	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	7.54	6.94	-	-
Critical Hdwy Stg 1	6.54	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-
Pot Cap-1 Maneuver	175	491	-	-
Stage 1	236	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	175	491	-	-
Mov Cap-2 Maneuver	175	-	-	-
Stage 1	236	-	-	-
Stage 2	-	-	-	-

Approach	EB	SB
HCM Control Delay, s	15.9	0
HCM LOS	C	

Minor Lane/Major Mvmt	EBLn1	SBT	SBR
Capacity (veh/h)	491	-	-
HCM Lane V/C Ratio	0.33	-	-
HCM Control Delay (s)	15.9	-	-
HCM Lane LOS	C	-	-
HCM 95th %tile Q(veh)	1.4	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	1	0	0	1127	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1	0	0	1225	8

Major/Minor	Minor2		Major2	
Conflicting Flow All	1229	615	-	0
Stage 1	1229	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	7.54	6.94	-	-
Critical Hdwy Stg 1	6.54	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-
Pot Cap-1 Maneuver	134	434	-	-
Stage 1	188	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	134	434	-	-
Mov Cap-2 Maneuver	134	-	-	-
Stage 1	188	-	-	-
Stage 2	-	-	-	-

Approach	EB	SB
HCM Control Delay, s	13.3	0
HCM LOS	B	

Minor Lane/Major Mvmt	EBLn1	SBT	SBR
Capacity (veh/h)	434	-	-
HCM Lane V/C Ratio	0.003	-	-
HCM Control Delay (s)	13.3	-	-
HCM Lane LOS	B	-	-
HCM 95th %tile Q(veh)	0	-	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	109	0	0	503	143
Conflicting Peds, #/hr	0	6	0	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	200
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	118	0	0	547	155

Major/Minor	Minor2		Major2	
Conflicting Flow All	553	278	-	0
Stage 1	553	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	7.54	6.94	-	-
Critical Hdwy Stg 1	6.54	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-
Pot Cap-1 Maneuver	416	719	-	-
Stage 1	485	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	412	715	-	-
Mov Cap-2 Maneuver	412	-	-	-
Stage 1	483	-	-	-
Stage 2	-	-	-	-

Approach	EB	SB
HCM Control Delay, s	11	0
HCM LOS	B	

Minor Lane/Major Mvmt	EBLn1	SBT	SBR
Capacity (veh/h)	715	-	-
HCM Lane V/C Ratio	0.166	-	-
HCM Control Delay (s)	11	-	-
HCM Lane LOS	B	-	-
HCM 95th %tile Q(veh)	0.6	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	7	0	0	612	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	8	0	0	665	13

Major/Minor	Minor2		Major2	
Conflicting Flow All	672	338	-	0
Stage 1	672	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	7.54	6.94	-	-
Critical Hdwy Stg 1	6.54	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-
Pot Cap-1 Maneuver	342	658	-	-
Stage 1	412	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	342	658	-	-
Mov Cap-2 Maneuver	342	-	-	-
Stage 1	412	-	-	-
Stage 2	-	-	-	-

Approach	EB	SB
HCM Control Delay, s	10.5	0
HCM LOS	B	

Minor Lane/Major Mvmt	EBLn1	SBT	SBR
Capacity (veh/h)	658	-	-
HCM Lane V/C Ratio	0.012	-	-
HCM Control Delay (s)	10.5	-	-
HCM Lane LOS	B	-	-
HCM 95th %tile Q(veh)	0	-	-

APPENDIX C:

NATURAL GROWTH VOLUME CALCULATIONS

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	158	0	0	1045	50
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	-	-	-	200
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	172	0	0	1136	54

Major/Minor	Minor2		Major2	
Conflicting Flow All	1136	567	-	0
Stage 1	1136	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	7.54	6.94	-	-
Critical Hdwy Stg 1	6.54	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-
Pot Cap-1 Maneuver	157	467	-	-
Stage 1	215	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	157	467	-	-
Mov Cap-2 Maneuver	157	-	-	-
Stage 1	215	-	-	-
Stage 2	-	-	-	-

Approach	EB	SB
HCM Control Delay, s	17.1	0
HCM LOS	C	

Minor Lane/Major Mvmt	EBLn1	SBT	SBR
Capacity (veh/h)	467	-	-
HCM Lane V/C Ratio	0.368	-	-
HCM Control Delay (s)	17.1	-	-
HCM Lane LOS	C	-	-
HCM 95th %tile Q(veh)	1.7	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	1	0	0	1196	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1	0	0	1300	8

Major/Minor	Minor2		Major2	
Conflicting Flow All	1304	653	-	0
Stage 1	1304	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	7.54	6.94	-	-
Critical Hdwy Stg 1	6.54	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-
Pot Cap-1 Maneuver	118	410	-	-
Stage 1	169	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	118	410	-	-
Mov Cap-2 Maneuver	118	-	-	-
Stage 1	169	-	-	-
Stage 2	-	-	-	-

Approach	EB	SB
HCM Control Delay, s	13.8	0
HCM LOS	B	

Minor Lane/Major Mvmt	EBLn1	SBT	SBR
Capacity (veh/h)	410	-	-
HCM Lane V/C Ratio	0.003	-	-
HCM Control Delay (s)	13.8	-	-
HCM Lane LOS	B	-	-
HCM 95th %tile Q(veh)	0	-	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	116	0	0	534	152
Conflicting Peds, #/hr	0	6	0	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	200
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	126	0	0	580	165

Major/Minor	Minor2		Major2	
Conflicting Flow All	586	295	-	0
Stage 1	586	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	7.54	6.94	-	-
Critical Hdwy Stg 1	6.54	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-
Pot Cap-1 Maneuver	394	701	-	-
Stage 1	463	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	390	697	-	-
Mov Cap-2 Maneuver	390	-	-	-
Stage 1	461	-	-	-
Stage 2	-	-	-	-

Approach	EB	SB
HCM Control Delay, s	11.3	0
HCM LOS	B	

Minor Lane/Major Mvmt	EBLn1	SBT	SBR
Capacity (veh/h)	697	-	-
HCM Lane V/C Ratio	0.181	-	-
HCM Control Delay (s)	11.3	-	-
HCM Lane LOS	B	-	-
HCM 95th %tile Q(veh)	0.7	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	7	0	0	639	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	8	0	0	695	14

Major/Minor	Minor2		Major2	
Conflicting Flow All	702	353	-	0
Stage 1	702	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	7.54	6.94	-	-
Critical Hdwy Stg 1	6.54	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-
Pot Cap-1 Maneuver	325	643	-	-
Stage 1	395	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	325	643	-	-
Mov Cap-2 Maneuver	325	-	-	-
Stage 1	395	-	-	-
Stage 2	-	-	-	-

Approach	EB	SB
HCM Control Delay, s	10.7	0
HCM LOS	B	

Minor Lane/Major Mvmt	EBLn1	SBT	SBR
Capacity (veh/h)	643	-	-
HCM Lane V/C Ratio	0.012	-	-
HCM Control Delay (s)	10.7	-	-
HCM Lane LOS	B	-	-
HCM 95th %tile Q(veh)	0	-	-

APPENDIX D:

FULL DEVELOPMENT VOLUME CALCULATIONS

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	50	0	0	1045	158
Conflicting Peds, #/hr	0	6	0	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	200
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	54	0	0	1136	172

Major/Minor	Minor2		Major2	
Conflicting Flow All	1142	573	-	0
Stage 1	1142	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	7.54	6.94	-	-
Critical Hdwy Stg 1	6.54	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-
Pot Cap-1 Maneuver	155	463	-	-
Stage 1	213	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	153	461	-	-
Mov Cap-2 Maneuver	153	-	-	-
Stage 1	212	-	-	-
Stage 2	-	-	-	-

Approach	EB	SB
HCM Control Delay, s	13.9	0
HCM LOS	B	

Minor Lane/Major Mvmt	EBLn1	SBT	SBR
Capacity (veh/h)	461	-	-
HCM Lane V/C Ratio	0.118	-	-
HCM Control Delay (s)	13.9	-	-
HCM Lane LOS	B	-	-
HCM 95th %tile Q(veh)	0.4	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	1	0	0	1196	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1	0	0	1300	8

Major/Minor	Minor2		Major2	
Conflicting Flow All	1304	653	-	0
Stage 1	1304	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	7.54	6.94	-	-
Critical Hdwy Stg 1	6.54	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-
Pot Cap-1 Maneuver	118	410	-	-
Stage 1	169	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	118	410	-	-
Mov Cap-2 Maneuver	118	-	-	-
Stage 1	169	-	-	-
Stage 2	-	-	-	-

Approach	EB	SB
HCM Control Delay, s	13.8	0
HCM LOS	B	

Minor Lane/Major Mvmt	EBLn1	SBT	SBR
Capacity (veh/h)	410	-	-
HCM Lane V/C Ratio	0.003	-	-
HCM Control Delay (s)	13.8	-	-
HCM Lane LOS	B	-	-
HCM 95th %tile Q(veh)	0	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	49	1	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	53	1	0	0	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	54	0	54	54
Stage 1	-	-	-	-	54	-
Stage 2	-	-	-	-	0	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1551	-	954	1013
Stage 1	-	-	-	-	969	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1551	-	954	1013
Mov Cap-2 Maneuver	-	-	-	-	954	-
Stage 1	-	-	-	-	969	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1551	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	7	0	0	649	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	8	0	0	705	8

Major/Minor	Minor2		Major2	
Conflicting Flow All	709	356	-	0
Stage 1	709	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	7.54	6.94	-	-
Critical Hdwy Stg 1	6.54	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-
Pot Cap-1 Maneuver	321	640	-	-
Stage 1	391	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	321	640	-	-
Mov Cap-2 Maneuver	321	-	-	-
Stage 1	391	-	-	-
Stage 2	-	-	-	-

Approach	EB	SB
HCM Control Delay, s	10.7	0
HCM LOS	B	

Minor Lane/Major Mvmt	EBLn1	SBT	SBR
Capacity (veh/h)	640	-	-
HCM Lane V/C Ratio	0.012	-	-
HCM Control Delay (s)	10.7	-	-
HCM Lane LOS	B	-	-
HCM 95th %tile Q(veh)	0	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	110	6	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	120	7	0	0	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	126	0	123	123
Stage 1	-	-	-	-	123	-
Stage 2	-	-	-	-	0	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1460	-	872	928
Stage 1	-	-	-	-	902	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1460	-	872	928
Mov Cap-2 Maneuver	-	-	-	-	872	-
Stage 1	-	-	-	-	902	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1460	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	110	0	0	534	152
Conflicting Peds, #/hr	0	6	0	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	200
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	120	0	0	580	165

Major/Minor	Minor2		Major2	
Conflicting Flow All	586	295	-	0
Stage 1	586	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	7.54	6.94	-	-
Critical Hdwy Stg 1	6.54	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-
Pot Cap-1 Maneuver	394	701	-	-
Stage 1	463	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	390	697	-	-
Mov Cap-2 Maneuver	390	-	-	-
Stage 1	461	-	-	-
Stage 2	-	-	-	-

Approach	EB	SB
HCM Control Delay, s	11.2	0
HCM LOS	B	

Minor Lane/Major Mvmt	EBLn1	SBT	SBR
Capacity (veh/h)	697	-	-
HCM Lane V/C Ratio	0.172	-	-
HCM Control Delay (s)	11.2	-	-
HCM Lane LOS	B	-	-
HCM 95th %tile Q(veh)	0.6	-	-