APPENDIX A

SERIES 11 FORECAST / TRIP GENERATION INFORMATION

SANDAG
Series 11 2030re
Select Zone Plot

Carmel Valley

Functional Classifications

- Freeway
- Prime
- Major
- Collector
- Light Collector
- Rural Collector
- Local
- Freeway Ramp
- Local Ramp
- Zone Connector

- Signal
- All Way Stop
- Two Way Stop
- Ramp Meter
- Ramp Meter HOV
- LRT Crossing

Traffic Analysis Zones

\# Select Link Volume & Percentage

\# ADT Volume (X1000)

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0 0.06 0.12 0.18
Miles

SANDAG

servicebureau

February 9, 2009

Jake Swim

ATTACHMENT 1

From: Little, Robert [rlittle@kilroyrealty.com]
Sent: Tuesday, April 13, 2010 5:33 PM
To: Jake Swim
Cc: usai@urbansystems.net; Andy; Chine, Jeffrey
Subject: RE: San Diego Corporate Center Lots - Land Use Categories

Jake – in response to your memo regarding land-uses and trip generation for the initial phase of 109,000 square feet / specialty retail center, below I outline the anticipated retail support mix of the phase:

APPAREL:
8,000 TO 10,000 sf such as Children's Place, Gap, Hollister, Lucky Jeans, etc
BEAUTY/HEALTH:
8,000 to 10,000 sf of Spa and accessories
2,000 of sunglasses or accessories
Support: FINANCIAL SERVICES (as part of the office buildings):
12,000 to 14,000 sf of bank, credit union and financial advisory services
Ancillary: FOOD (14,000 sf as part of the office buildings) :
15,000 to 16,000 sf of coffee, yogurt, ice cream, bakery, sandwich/deli, asian, american, mexican.
16,000 to 18,000 of restaurant such as Morton's, Flemings, Sushi, Pizzeria.
HOME /ELECTRONICS:
Up to 36,000 sf combination of wireless stores, Apple, other computer, Pottery Barn , William Sonoma, West Elm, etc

OVERALL SUMMARY Initial Phase:
BLOCK D 53,900 sf (of which 18,000 sf is located within office building)
BLOCK E 48,900 sf (of which 25,800 sf is located within office building)
Approx. TOTAL 102,800 sf of 109,000 sf.

Please call me with any questions,
Bob

From: Jake Swim [mailto:jake@urbansystems.net]
Sent: Friday, April 09, 2010 3:46 PM
To: Little, Robert
Cc: usai@urbansystems.net; 'Andy'; 'Chine, Jeffrey'
Subject: San Diego Corporate Center Lots - Land Use Categories

Hi Bob,

Please see the attached memo.

Jacob Swim
Project Manager
Urban Systems & Associates, Inc.
4540 Kearny Villa Road, Suite 106
San Diego, CA 92123-1573
(858) 560-4911 x 306

ATTACHMENT 2

Categories of Commercial-Retail Trip Land Uses and Trip Generation

#	Land use category	Trip Generation Rate
1	Convenience Market	500 trips / 1000 sq. ft.
2	Furniture Store	6 trips / 1000 sq. ft.
3	Home Improvement Store	30 trips / 1000 sq. ft.
4	Lumber Store	30 trips / 1000 sq. ft.
5	Nursery	40 trips / 1000 sq. ft.
6	Shopping Center	N/A
7	Neighborhood Shopping Center	120 trips / 1000 sq. ft.
8	Community Shopping Center	70 trips / 1000 sq. ft.
9	Regional Shopping Center	Ln(T) = 0.756*Ln(x)+5.25
10	Specialty Retail Center / Strip Commercial	40 trips / 1000 sq. ft.
11	Supermarket	150 trips / 1000 sq. ft.

Note: Driveway rates used in this table.

DEFINITION OF LAND USE CATEGORIES FOR TRIP GENERATION PURPOSES

AGRICULTURE/OPEN SPACE

A tract of land used for producing crops or raising livestock, and in varying degrees, the preparation of these products for human use. "Open Space" refers to a tract of land specifically designated as an open space zone and used to protect open space for natural resources preservation, park and recreation use, or scenic enjoyment.

AUTO-SERVING COMMERCIAL

GASOLINE SERVICE STATION
A gasoline service station is a freestanding commercial establishment designed primarily for the sale of gasoline to the motoring public. Maintenance and repair work may also be done, as well as the sale of auto-related accessories.

CAR DEALER
A car dealer is a freestanding structure normally with open or shed-like parking lot designed for the sale of new and used cars and trucks. Car dealers also provide maintenance service and the sale of automobile accessories.

CAR WASH (Full Service)
A car wash is a freestanding building, which houses equipment for washing vehicles. It also has an area for drying off vehicles after they are washed.

AIRPORT

GENERAL AVIATION
A general aviation airport is designed primarily for the use of small private and corporate aircraft; and not for regularly scheduled commercial passenger service. A general aviation airport is usually characterized by short runways, few or no terminal facilities, and many small planes.

COMMERCIAL - RETAIL

CONVENIENCE MARKET
1 A convenience market is usually a small, freestanding establishment selling food items, beverages and other sundry items. Sales are typically of small quantities. Convenience markets have largely supplanted the neighborhood corner store, particularly in suburban areas. Convenience markets with more than four vehicle-fueling spaces will be considered as gasoline stations with food mart.

2 FURNITURE STORE
A retail establishment displaying and selling residential furniture items, typically having a small staff in relation to total square feet.

3 HOME IMPROVEMENT STORE
A retail establishment selling home improvement and related supplies in one location.

4 LUMBER STORE
A retail establishment selling lumber, home improvement and related supplies in one location.

5 NURSERY
A nursery is a place where plants and flowers are grown for sale.

6 SHOPPING CENTER
A shopping center is a conglomerate of individual businesses designed for the retail sale of a large spectrum of products ranging from clothing to jewelry, art, etc. Shopping centers normally contain specialty shops, eating establishments, and department stores. Some services such as travel agencies, insurance offices, beauty salons, etc. may also be located in a shopping center. All stores normally have a common parking area.

7 NEIGHBORHOOD SHOPPING CENTER
A neighborhood shopping center typically has a gross leasable floor area of 30,000 square feet or more, located on at least four or more acres. The principal retail outlet may be a supermarket supported by a drugstore and/or some other smaller retail store(s). The trading radius is usually less than three miles and serves a population of roughly 5,000-10,000 people.

8 COMMUNITY SHOPPING CENTER
A community shopping center typically has a gross leasable floor area of 100,000 square feet or more, located on 10 or more acres. The leading retail outlets are usually a discount store (i.e., Wal-Mart, Kmart, T J Maxx, Ross, and Home Depot), and may also include a grocery store or drugstore. The trading radius can be three miles or more and serve a population area of about 25,000 people.

9 REGIONAL SHOPPING CENTER
A regional shopping center typically has a gross leasable floor area of 300,000 square feet or more. The center is usually under one management which has a regional service area and two or more major department stores, supported by a number of specialty retail stores.

10 SPECIALTY RETAIL CENTER/STRIP COMMERCIAL
A freestanding retail store is a single building with separate parking where merchandise is sold to the end user, usually in small quantities. Minor auxiliary services that are independently owned and operated from the major store can be a part of the retail facility. Free standing retail stores may be of any size but usually are a function of the merchandise sold, and the locality. In general, as the gross floor area approaches 100,000 square feet, the stores lose their "freestanding" character and become part of a shopping center. The number of employees in freestanding retail stores is a function of the sales volume and land acreage and depends on the

store type, size, and attractiveness to the consumer. Supermarkets, convenience stores, discount stores, lumber stores and furniture stores are typically not included in this category (as they are treated individually for trip generation).

SUPERMARKET
A supermarket is a freestanding, self-service store, which sells food, beverages, and household items.

EDUCATION

UNIVERSITY
A university is a major educational facility that grants bachelor degrees with a four-year curriculum. Universities are normally located on a park-like campus consisting of many buildings. They may be state-supported or privately run.

COMMUNITY COLLEGE
A college that grants associate degrees in a two-year curriculum, and is usually state-supported.

HIGH SCHOOL
A high school is a secondary school with a three or four-year curriculum. A high school is usually located on a campus-like setting with associated sports facilities.

JUNIOR HIGH SCHOOL (MIDDLE SCHOOL)
Junior high schools are secondary schools designed to educate a group of children in grades, which are intermediate--between grade school and high school. Junior high schools are normally freestanding and include athletic fields.

ELEMENTARY SCHOOL (GRADE SCHOOL)
An elementary school is a school normally serving grades kindergarten through six. An elementary school is usually an isolated building with an associated playground.

DAY CARE CENTER
A day care center is a place where preschool children are cared for during the workday.

FINANCIAL INSTITUTIONS

BANK OR CREDIT UNION (EXCLUDING DRIVE-THROUGH LANES)
A bank or credit union is a freestanding structure for the custody, loan, exchange or issues of money or credit. Trips for drive-through facilities should be generated separately and added to the lobby totals.

BANK OR CREDIT UNION (DRIVE-THROUGH LANES ONLY)
A bank or credit union that provides its services only through drive-through lanes. Such facility should be clearly labeled a "drive-through bank" for trip generation purposes. Trips for drive-through tellers should be generated separately, even if adjoining a bank lobby.

TABLE 1

May 2003

TRIP GENERATION RATE SUMMARY
(WEEKDAY)

LAND USE	DRIVEWAY [1] [2] VEHICLE TRIP RATE	CUMULATIVE [8] VEHICLE TRIP RATE	PEAK HOUR AND IN/OUT RATIO AM (IN:OUT)	PM IN:OUT)
CULTURE (OPEN SPACE) [3]	2 trips/acre	2 trips/acre	--	--
IRT [3]				
mercial	100 trips/flight; 60 trips/acre	100 trips/flight; 60 trips/acre	6% (6:4)	7% (5:5)
ral Aviation	2 trips/flight; 6 trips/acre	2 trips/flight; 6 trips/acre	--	--
TERY	5 trips/acre	5 trips/acre	--	--
MERCIAL-RETAIL [4] [5]				
omobile Services:				
Car Dealer	50 trips/1,000 sq. ft.; 300 trips/acre	45 trips/1,000 sq. ft.; 297 trips/acre	5% (7:3)	8% (4:6)
Carwash:				
Full service	900 trips/site; 600 trips/acre	450 trips/site; 300 trips/acre	4% (5:5)	9% (5:5)
Self service	100 trips/wash stall	50 trips/wash stall	4% (5:5)	8% (5:5)
Gasoline Stations:	130 trips/vehicle fueling space; 750 trips/station	26 trips/vehicle fueling space; 150 trips/station	7% (5:5)	11% (5:5)
With food mart	150 trips/vehicle fueling space	30 trips/vehicle fueling space	8% (5:5)	8% (5:5)
With fully automated carwash	135 trips/vehicle fueling space	27 trips/vehicle fueling space	--	--
With food mart & fully automated carwash	155 trips/vehicle fueling space	31 trips/vehicle fueling space	8% (5:5)	10% (5:5)
Parts Sale	62 trips/1,000 sq. ft.	56 trips/1,000 sq. ft.	4% (5:5)	10% (5:5)
Repair Shop	20 trips/1,000 sq. ft.; 20 trips/service stall; 400 trips/acre	18 trips/1,000 sq. ft.; 19 trips/service stall	8% (7:5)	11% (4:6)
Tire Store	25 trips/1,000 sq. ft.; 30 trips/service stall	23 trips/1,000 sq. ft.; 27 trips/service stall	7% (6:4)	11% (5:5)
Convenience Market Chain:				
Open Up to 16 Hours Per Day	500 trips/1,000 sq. ft.	250 trips/1,000 sq. ft.	8% (5:5)	8% (5:5)
Open 24 Hours	700 trips/1,000 sq. ft.	350 trips/1,000 sq. ft.	9% (5:5)	7% (5:5)
Discount Store/Discount Club	70 trips/1,000 sq. ft.	49 trips/1,000 sq. ft.	2% (6:4)	10% (5:5)
Superstore	90 trips/1,000 sq. ft.	40 trips/1,000 sq. ft.	4% (6:4)	10% (5:5)
Furniture Store	6 trips/1,000 sq. ft.; 100 trips/acre	5.4 trips/1,000 sq. ft.	4% (7:3)	9% (5:5)
Lumber/Home Improvement Store	90 trips/1,000 sq. ft.; 150 trips/acre	27 trips/1,000 sq. ft.; 135 trips/acre	7% (6:4)	9% (5:5)
Nursery	40 trips/1,000 sq. ft.; 90 trips/acre	36 trips/1,000 sq. ft.; 81 trips/acre	3% (6:4)	10% (5:5)
Restaurant:				
Quality	100 trips/1,000 sq. ft.; 3 trips/seat; 500 trips/acre	90 trips/1,000 sq. ft.; 2.7 trips/seat; 450 trips/acre	1% (6:4)	8% (7:3)
High Turnover (sit-down)	130 trips/1,000 sq. ft.; 7 trips/seat; 1,500 trips/acre	104 trips/1,000 sq. ft.; 5.6 trips/seat; 460 trips/acre	8% (5:5)	8% (6:4)
Fast Food (with or without drive-through)	700 trips/1,000 sq. ft.; 22 trips/seat; 3,000 trips/acre	420 trips/1,000 sq. ft.; 13.2 trips/seat; 1,800 trips/acre	4% (6:4)	8% (5:5)
Shopping Center:				
Neighborhood (30,000 sq. ft. or more GLA on 4 or more acres)	120 trips/1,000 sq. ft. GLA; 1,200 trips/acre	72 trips/1,000 sq. ft.; 720 trips/acre	4% (6:4)	11% (5:5)
Community (100,000 sq. ft. or more GLA on 10 or more acres)	70 trips/1,000 sq. ft. GLA; 700 trips/acre	49 trips/1,000 sq. ft.; 490 trips/acre	3% (6:4)	10% (5:5)
Regional (300,000 sq. ft. or more GLA) (6)	$Ln(T) = 0.756 Ln(x) + 5.25$ *	$Ln(T) = 0.756 Ln(x) + 5.25$ *	2% (7:3)	9% (5:5)
Specialty Retail Center/Strip Commercial	40 trips/1,000 sq. ft.; 400 trips/acre	36 trips/1,000 sq. ft.; 360 trips/acre	3% (6:4)	9% (5:5)
Supermarket	150 trips/1,000 sq. ft.; 2,000 trips/acre	90 trips/1,000 sq. ft.; 2,000 trips/acre	4% (7:3)	10% (5:5)

* See Table 2

TABLE 1 (Continued)

May 2003

TRIP GENERATION RATE SUMMARY
(WEEKDAY)

LAND USE	DRIVEWAY [1] [2] VEHICLE TRIP RATE	CUMULATIVE [8] VEHICLE TRIP RATE	PEAK HOUR AND IN/OUT RATIO AM (IN:OUT)	PM (IN:OUT)
ATION [3]				
ersity (4 years or higher)	2.5 trips/student; 100 trips/acre	2.5 trips/student; 100 trips/acre	10% (9:1)	9% (3:7)
munity College (2 years)	1.6 trips/student; 80 trips/acre; 18 trips/1,000 sq. ft.	1.6 trips/student; 80 trips/acre; 18 trips/1,000 sq. ft.	12% (9:1)	8% (3:7)
School	1.8 trips/student; 13 trips/1,000 sq. ft.; 50 trips/acre	1.8 trips/student; 11 trips/1,000 sq. ft.; 50 trips/acre	20% (8:2)	14% (3:7)
High/Middle School	1.4 trip/student; 40 trips/acre; 12 trips/1,000 sq. ft.	1.4 trips/student; 40 trips/acre; 12 trips/1,000 sq. ft.	24% (7:3)	17% (3:7)
ientary School	2.1 trips/student; 34 trips/1,000 sq. ft.; 119 trips/acre	2.1 trips/student; 34 trips/1,000 sq. ft.; 119	31% (6:4)	19% (4:6)
Care Center	5 trips/child; 80 trips/1,000 sq.ft.	5 trips/child; 80 trips/1,000 sq. ft.	19% (5:5)	18% (5:5)
NCIAL INSTITUTION (Bank or Credit Union) [5]				
uding drive-through	150 trips/1,000 sq. ft.; 1,000 trips/acre	112.5 trips/1,000 sq. ft.; 750 trips/acre	4% (7:3)	8% (4:6)
drive-through	200 trips/1,000 sq. ft.; 1,500 trips/acre	150 trips/1,000 sq. ft.; 1,125 trips/acre	5% (6:4)	10% (5:5)
e-through only	250 trips/lane	187.5 trips/lane	3% (5:5)	13% (5:5)
ITAL [3]				
ralescent/Nursing	3 trips/bed	3 trips/bed	7% (6:4)	7% (4:6)
ital	20 trips/bed; 20 trips/1,000 sq. ft.; 300 trips/acre	20 trips/bed; 20 trips/1,000 sq. ft.; 300 trips/acre	9% (7:3)	10% (3:7)
E OF WORSHIP [4]				
ral	15 trips/1,000 sq. ft.; quadruple rates for days of	9 trips/1,000 sq. ft.; quadruple rate for days of	4% (8:2)	8% (5:5)
ool School or Day Care	5 trips/1,000 sq. ft.; quadruple rates for days of assembly	5 trips/1,000 sq. ft.; quadruple rate for days of	4% (8:2)	8% (5:5)
STRIAL				
strial/Business Park (some commercial included) [3]	16 trips/1,000 sq. ft.; 200 trips/acre	16 trips/1,000 sq. ft.; 200 trips/acre	12% (1:2)	12% (2:8)
ll Industrial Park [7] *	15 trips/1,000 sq. ft.; 120 trips/acre	15 trips/1,000 sq. ft.; 120 trips/acre	11% (9:1)	12% (2:8)
e Industrial Park *	8 trips/1,000 sq. ft.; 100 trips/acre	8 trips/1,000 sq. ft.; 100 trips/acre	11% (9:1)	12% (2:8)
ufacturing/Assembly	4 trips/1,000 sq. ft.; 50 trips/acre	4 trips/1,000 sq. ft.; 50 trips/acre	20% (9:1)	20% (2:8)
al Storage	2 trips/1,000 sq. ft.; 30 trips/acre	2 trips/1,000 sq. ft.; 30 trips/acre	6% (5:5)	9% (5:5)
ntific Research and Development	8 trips/1,000 sq. ft.; 80 trips/acre	8 trips/1,000 sq. ft.; 80 trips/acre	16% (9:1)	14% (1:9)
s Terminal	10 trips/1,000 sq. ft.; 7 trips/bay; 80 trips/acre	10 trips/1,000 sq. ft.; 7 trips/bay; 80 trips/acre	9% (4:6)	8% (5:5)
housing	5 trips/1,000 sq. ft.; 60 trips/acre	5 trips/1,000 sq. ft.; 60 trips/acre	15% (7:3)	16% (4:6)
ARY [3]	50 trips/1,000 sq. ft.; 400 trips/acre		2% (7:3)	10% (5:5)
than 100,000 sq. ft.		20 trips/1,000 sq. ft.	2% (7:3)	10% (5:5)
000 sq. ft. or more		16 trips/1,000 sq. ft.	2% (7:3)	10% (5:5)

ll amount of local serving commercial included. May have multiple shifts.

TABLE 1 (Continued)

May 2003

TRIP GENERATION RATE SUMMARY
(WEEKDAY)

LAND USE	DRIVEWAY [1] [2] VEHICLE TRIP RATE	CUMULATIVE [8] VEHICLE TRIP RATE	PEAK HOUR AND IN/OUT RATIO AM (IN:OUT)	PM (IN:OUT)
GING [3]				
tel (w/convention facilities/restaurant)	10 trips/room; 300 trips/acre	10 trips/room; 300 trips/acre	6% (6:4)	8% (6:4)
del	9 trips/room; 200 trips/acre	9 trips/room; 200 trips/acre	8% (4:6)	9% (4:6)
sort Hotel	8 trips/room; 100 trips/acre	8 trips/room; 100 trips/acre	5% (6:4)	7% (6:4)
TARY BASE [3]	2.5 trips/employee (military or civilian)	2.5 trips/employee (military or civilian)	9% (9:1)	10% (6:4)
CE				
mmercial Office [6]	Ln(T) = 0.756 Ln(x) + 3.95; 450 trips/acre	Ln(T) = 0.756 Ln(x) + 3.95; 450 trips/acre	13% (9:1)	14% (2:8)
rporate Headquarters/Single Tenant Office	10 trips/1,000 sq. ft.	10 trips/1,000 sq. ft.	15% (9:1)	15% (1:9)
partment of Motor Vehicles	180 trips/1,000 sq. ft.; 900 trips/acre	18 trips/1,000 sq. ft.	6% (6:4)	11% (4:6)
vernment Office (Civic Center):	30 trips/1,000 sq. ft.		9% (9:1)	12% (3:7)
Less than 100,000 sq. ft.		20 trips/1,000 sq. ft.	9% (9:1)	12% (3:7)
100,000 sq. ft. or more		16 trips/1,000 sq. ft.	9% (9:1)	12% (3:7)
dical Office:	50 trips/1,000 sq. ft.; 500 trips/acre		6% (8:2)	10% (3:7)
Less than 100,000 sq. ft.		20 trips/1,000 sq. ft.	6% (8:2)	10% (3:7)
100,000 sq. ft. or more		16 trips/1,000 sq. ft.	6% (8:2)	10% (3:7)
t Office:				
Distribution (central/walk-in only)	90 trips/1,000 sq. ft.	76 trips/1,000 sq. ft.	5%	7%
Community (without mail drop lane)	200 trips/1,000 sq. ft.; 1,300 trips/acre	168 trips/1,000 sq. ft.; 1,092 trips/acre	6% (6:4)	9% (5:5)
Community (with mail drop lane)	300 trips/1,000 sq. ft.; 2,000 trips/acre		7% (5:5)	9% (3:7)
Less than 100,000 sq. ft.		168 trips/1,000 sq. ft.; 1,092 trips/acre	7% (5:5)	7% (6:4)
100,000 sq. ft. or more		252 trips/1,000 sq. ft.; 1,680 trips/acre	7% (5:5)	8% (7:3)
REATION				
wling Center	30 trips/lane; 300 trips/acre	30 trips/lane; 300 trips/acre	7% (7:3)	10% (4:6)
lf Course	600 trips/course; 40 trips/hole; 8 trips/acre	600 trips/course; 40 trips/hole; 8 trips/acre	6% (8:2)	9% (3:7)
rina	4 trips/berth; 20 trips/acre	4 trips/berth; 20 trips/acre	3% (3:7)	7% (6:4)
vie Theater	80 trips/1,000 sq. ft.; 1.8 trips/seat	80 trips/1,000 sq. ft.; 1.8 trips/seat	0.3%	8% (7:3)
k:				
Beach, Ocean or Bay	600 trips/1,000 ft. shoreline; 60 trips/acre	600 trips/1,000 ft. shoreline; 60 trips/acre	--	11% (4:6)
Developed	50 trips/acre	50 trips/acre	4%	8%
Undeveloped	5 trips/acre	5 trips/acre	4%	8%
squetball/Tennis/Health Club	40 trips/1,000 sq. ft.; 40 trips/court; 300 trips/acre	40 trips/1,000 sq. ft.; 40 trips/court; 300 trips/acre	4% (6:4)	9% (6:4)
n Diego Zoo	115 trips/acre	115 trips/acre	--	--
World	80 trips/acre	80 trips/acre	--	--
rt Facility:				
ndoor	30 trips/acre	30 trips/acre	--	--
Outdoor	50 trips/acre	50 trips/acre	--	--

TRIP GENERATION RATE SUMMARY
(WEEKDAY)

LAND USE	DRIVEWAY [1] [2] VEHICLE TRIP RATE	CUMULATIVE [8] VEHICLE TRIP RATE	PEAK HOUR AND IN/OUT RATIO AM (IN:OUT)	PM (IN:OUT)
DENTIAL [3]				
gregate Care Facility	2 trips/dwelling unit	2 trips/dwelling unit	3% (6:4)	8% (5:5)
e Housing	12 trips/dwelling unit	12 trips/dwelling unit	--	--
ile Home	5 trips/dwelling unit; 40 trips/acre	5 trips/dwelling unit; 40 trips/acre	9% (3:7)	12% (6:4)
iple Dwelling Unit:				
der 20 dwelling units/acre	8 trips/dwelling unit	8 trips/dwelling unit	8% (2:8)	10% (7:3)
r 20 dwelling units/acre	6 trips/dwelling unit	6 trips/dwelling unit	8% (2:8)	--
rement/Senior Citizen Housing	4 trips/dwelling unit	4 trips/dwelling unit	--	--
le Family Detached:				
mized Area [1]	9 trips/dwelling unit	9 trips/dwelling unit	8% (2:8)	10% (7:3)
nizing Area [1]	10 trips/dwelling unit	10 trips/dwelling unit	8% (2:8)	10% (7:3)
NSPORTATION FACILITIES [3]				
Depot	25 trips/1,000 sq. ft.	25 trips/1,000 sq. ft.		
& Ride Lots	400 trips/acre; 600 trips/paved acre	400 trips/acre; 600 trips/paved acre	14% (7:3)	15% (3:7)
it Station (rail)	300 trips/acre	300 trips/acre	14% (7:3)	15% (3:7)

Notes:

(1) From the 1990 Trip Generation Manual. Driveway rates reflect trips that are generated by a site. These rates are used to calculate the total number of trips that impact the project and its immediate vicinity.

(2) Does not include trip rates for Centre City area. See Table 5.

(3) San Diego Association of Governments (SANDAG), "Traffic Generators," San Diego, California, December 1996, and July 1998.

(4) City of San Diego memo, "Trip Generation Rate for Churches," December 9, 1992.

(5) Refer to Cumulative Vehicle Trip Rate column for reduced trip rates.

(6) Ln = Natural logarithm; fitted curve logarithmic equation is used for Commercial Office and Regional Shopping Center. For example, the trip generation of an Office Building with 100,000 sq. ft. of GLA is: $Ln(T) = 0.756\ Ln(100) + 3.95$, or $Ln(T) = 0.756\ (4.60517) + 3.95$, or $Ln(T) = 3.481509 + 3.95$, or $Ln(T) = 7.431509$, which is 1,688 trips. The trip generation of a Regional Shopping Center with 1,000,000 sq. ft. of GLA is: $Ln(T) = 0.756\ Ln(1,000) + 5.25$, or $Ln(T) = 0.756\ (6.907755) + 5.25$, or $Ln(T) = 5.222263 + 5.25$, or $Ln(T) = 10.47226$, which is 35,322 trips. See Table 2 for calculated trip generation for selected sizes of Regional Shopping Centers, and Table 3 for calculated trip generation for selected sizes of Commercial Offices. GLA = Gross Leasable Area; T = trips; x = GLA in 1,000 square feet.

(7) Institute of Transportation Engineers, "Trip Generation," 5th and 6th Editions, Washington, District of Columbia, 1991 and 1998.

(8) Trips made to a site are Pass-By and Cumulative trips. See Appendix A for definitions of these trips. Cumulative rates are used to determine the community-wide impact of a new project.

Land Use: 443
Movie Theater without Matinee
Independent Variables with One Observation

The following trip generation data are for independent variables with only one observation. This information is shown in this table only; there are no related plots for these data.

Users are cautioned to use data with care because of the small sample size.

Independent Variable	Trip Generation Rate	Size of Independent Variable	Number of Studies	Directional Distribution
Employees				
Weekday	53.12	41	1	50% entering, 50% exiting
Weekday a.m. Peak Hour of Adjacent Street Traffic	0.15	41	1	Not available
Weekday p.m. Peak Hour of Adjacent Street Traffic	4.20	41	1	Not available
Weekday a.m. Peak Hour of Generator	1.95	41	1	Not available
Weekday p.m. Peak Hour of Generator	9.56	41	1	Not available
Saturday	67.56	41	1	50% entering, 50% exiting
Saturday Peak Hour of Generator	10.73	41	1	Not available
Sunday	55.73	41	1	50% entering, 50% exiting
Sunday Peak Hour of Generator	7.32	41	1	Not available
Seats				
Weekday	1.76	1,236	1	50% entering, 50% exiting
Weekday a.m. Peak Hour of Adjacent Street Traffic	0.01	1,236	1	Not available
Weekday a.m. Peak Hour of Generator	0.06	1,236	1	Not available
Weekday p.m. Peak Hour of Generator	0.32	1,236	1	Not available
Saturday	2.24	1,236	1	50% entering, 50% exiting
Saturday Peak Hour of Generator	0.36	1,236	1	Not available
Sunday	1.85	1,236	1	50% entering, 50% exiting
Sunday Peak Hour of Generator	0.24	1,236	1	Not available

Land Use: 443
Movie Theater without Matinee
Independent Variables with One Observation

Movie Screens

Weekday	220.00	6	1	50% entering, 50% exiting
Weekday p.m. Peak Hour of Adjacent Street Traffic	24.00	6	1	41% entering, 59% exiting
Weekday p.m. Peak Hour of Generator	37.83	6	1	52% entering, 48% exiting
Saturday	376.00	6	1	50% entering, 50% exiting
Saturday Peak Hour of Generator	64.50	6	1	61% entering, 39% exiting
Sunday	314.00	6	1	50% entering, 50% exiting
Sunday Peak Hour of Generator	45.17	6	1	52% entering, 48% exiting

1,000 Square Feet Gross Floor Area

Weekday	78.06	28	1	50% entering, 50% exiting
Weekday a.m. Peak Hour of Adjacent Street Traffic	0.22	28	1	Not available
Weekday p.m. Peak Hour of Adjacent Street Traffic	6.16	28	1	94% entering, 6% exiting
Weekday a.m. Peak Hour of Generator	2.87	28	1	Not available
Weekday p.m. Peak Hour of Generator	14.05	28	1	Not available
Saturday	99.28	28	1	50% entering, 50% exiting
Saturday Peak Hour of Generator	15.77	28	1	61% entering, 39% exiting
Sunday	81.90	28	1	50% entering, 50% exiting
Sunday Peak Hour of Generator	10.75	28	1	52% entering,48% exiting

APPENDIX B

ADDITIONAL PROJECT ANALYSIS USING 70 TRIPS / 1,000 SQUARE FEET VS. A BLENDED RATE FOR THE COMMUNITY SHOPPING CENTER

PHASE 1
70 vs. 40 Analysis
One Paseo Trip Generation Table

Proposed Project - Phase 1 (Blocks D & E)

Use	Amount	Trip	ADT	AM Peak Hour					PM Peak Hour				
				%*	#	In : Out	In	Out	%*	#	In : Out	In	Out
Corporate Office	245,000 SF	10 /KSF	2,450	15%	368	9 : 1	331	37	15%	368	1 : 9	37	331
Multi-Tenant Office	291,000 SF	Ln(T) = 0.756 Ln(x) + 3.95	3,786	13%	492	9 : 1	443	49	14%	530	2 : 8	106	424
Community Shopping Center	100,650 SF	70 /KSF	7,046	3%	211	6 : 4	127	85	9%	634	5 : 5	317	317
TOTAL			13,281		1,071		901	171		1,532		460	1,072

Mixed Use Reductions

Use	Amount	Trip	ADT	AM Peak Hour					PM Peak Hour				
				%*	#	In : Out	In	Out	%*	#	In : Out	In	Out
Corporate Office	245,000 SF	10 /KSF	2,450	15%	368	9 : 1	331	37	15%	368	1 : 9	37	331
Multi-Tenant Office	291,000 SF	Ln(T) = 0.756 Ln(x) + 3.95	3,786	13%	492	9 : 1	443	49	14%	530	2 : 8	106	424
Commercial Office Reduction %			3%		5%		5%	5%		4%		4%	4%
Sub-Total Commercial Office Reduction			187		43		39	4		36		6	30
Retail	100,650 SF	70 /KSF	7,046	3%	211	6 : 4	127	85	9%	634	5 : 5	317	317
Sub-Total Commercial Retail Reduction			187		43		39	4		36		6	30
TOTAL REDUCTION			374		86		78	8		72		12	60

Notes:

* = Source: City of San Diego Trip Generation Manual, May 2003

KSF = 1,000 Square Foot

One Paseo Trip Generation Table
PHASE 1
70 vs. 40 Analysis

NET NEW TRIPS

Condition	ADT	AM Peak Hour			PM Peak Hour		
		#	In	Out	#	In	Out
Proposed Project	13,281	1,071	901	171	1,532	460	1,072
Mixed Use Reductions	374	86	78	8	72	12	60
TOTAL	12,907	985	823	162	1,460	448	1,012

Notes:

* = Source: City of San Diego Trip Generation Manual, May 2003

One Paseo Trip Generation Table

Phase 1 & 2

70 vs. 40 Analysis

Proposed Project (Blocks A, D, & E)

Use	Amount	Trip	ADT	AM Peak Hour					PM Peak Hour				
				%*	#	In : Out	In	Out	%*	#	In : Out	In	Out
Corporate Office	245,000 SF	10 /KSF	2,450	15%	368	9 : 1	331	37	15%	368	1 : 9	37	331
Multi-Tenant Office	291,000 SF	Ln(T) = 0.756 Ln(x) + 3.95	3,786	13%	492	9 : 1	443	49	14%	530	2 : 8	106	424
Community Shopping Center	166,260 SF	70 /KSF	11,638	3%	349	6 : 4	209	140	10%	1,164	5 : 5	582	582
Multi-Family Residential	194 DU	6 /DU	1,164	8%	93	2 : 8	19	74	10%	116	7 : 3	81	35
TOTAL			19,038		1,302		1,002	300		2,178		806	1,372

Mixed Use Reductions

Use	Amount	Trip	ADT	AM Peak Hour					PM Peak Hour				
				%*	#	In : Out	In	Out	%*	#	In : Out	In	Out
Corporate Office	245,000 SF	10 /KSF	2,450	15%	368	9 : 1	331	37	15%	368	1 : 9	37	331
Multi-Tenant Office	291,000 SF	Ln(T) = 0.756 Ln(x) + 3.95	3,786	13%	492	9 : 1	443	49	14%	530	2 : 8	106	424
Commercial Office Reduction %			3%		5%		5%	5%		4%		4%	4%
Sub-Total Commercial Office Reduction			187		43		39	4		36		6	30
Multi-Family Residential	194 DU	6 /DU	1,164	8%	93	2 : 8	19	74	10%	116	7 : 3	81	35
Residential Reduction %			10%		8%		8%	8%		10%		10%	10%
Sub-Total Residential Reduction			116		7		1	6		12		8	3
Community Shopping Center	166,260 SF	70 /KSF	11,638	3%	349	6 : 4	209	140	10%	1,164	5 : 5	582	582
Commercial Retail Reduction			303		50		40	10		48		14	34
Sub-Total Commercial Retail Reduction			11,335		299		169	129		1,116		568	548
TOTAL REDUCTION			607		101		80	21		95		28	67

Notes:

* = Source: City of San Diego Trip Generation Manual, May 2003

DU = Dwelling Unit

KSF = 1,000 Square Foot

One Paseo Trip Generation Table

Phase 1 & 2

70 vs. 40 Analysis

NET NEW TRIPS

Condition	ADT	AM Peak Hour			PM Peak Hour		
		#	In	Out	#	In	Out
Proposed Project	19,038	1,302	1,002	300	2,178	806	1,372
Mixed Use Reductions	607	101	80	21	95	28	67
TOTAL	18,431	1,201	921	279	2,083	778	1,304

Notes:

* = Source: City of San Diego Trip Generation Manual, May 2003

One Paseo Trip Generation Table

(Project Buildout)

70 vs. 40 Analysis

Proposed Project

Use	Amount		Trip	ADT	AM Peak Hour					PM Peak Hour					
					%*	#	In	: Out	In	Out	%*	#	In	: Out	In	Out
Corporate Office	245,000	SF	10 /KSF	2,450	15%	368	9	: 1	331	37	15%	368	1	: 9	37	331
Multi-Tenant Office	291,000	SF	Ln(T) = 0.756 Ln(x) + 3.95	3,786	13%	492	9	: 1	443	49	14%	530	2	: 8	106	424
Hotel	150	Rms	10 /Rm	1,500	6%	90	6	: 4	54	36	8%	120	6	: 4	72	48
Community Shopping Center	220,000	SF	70 /KSF	15,400	3%	462	6	: 4	277	185	10%	1,540	5	: 5	770	770
Cinema[1]	10	screens	220 /screen	2,200	0%	0	0	: 0	0	0	24	240	41	: 59	98	142
Multi-Family Residential	608	DU	6 /DU	3,648	8%	292	2	: 8	58	233	10%	365	7	: 3	255	109
TOTAL				28,984		1,704			1,163	540		3,162			1,339	1,824

Mixed Use Reductions

Use	Amount		Trip	ADT	AM Peak Hour					PM Peak Hour					
					%*	#	In	: Out	In	Out	%*	#	In	: Out	In	Out
Corporate Office	245,000	SF	10 /KSF	2,450	15%	368	9	: 1	331	37	15%	368	1	: 9	37	331
Multi-Tenant Office	291,000	SF	Ln(T) = 0.756 Ln(x) + 3.95	3,786	13%	492	9	: 1	443	49	14%	530	2	: 8	106	424
Commercial Office Reduction %				3%		5%			5%	5%		4%			4%	4%
Sub-Total Commercial Office Reduction				187		43			39	4		36			6	30
Hotel	150	Rms	10 /Rm	1,500	6%	90	6	: 4	54	36	8%	120	6	: 4	72	48
Multi-Family Residential	608	DU	6 /DU	3,648	8%	292	2	: 8	58	233	10%	365	7	: 3	255	109
Residential Reduction %				10%		8%			8%	8%		10%			10%	10%
Sub-Total Residential Reduction				515		31			9	22		48			33	16
Community Shopping Center	220,000	SF	70 /KSF	15,400	3%	462	6	: 4	277	185	10%	1,540	5	: 5	770	770
Cinema[1]	10	screens	220 /screen	2,200	0%	0	0	: 0	0	0	24	240	41	: 59	98	142
Commercial Retail Reduction				702		74			48	26		84			38	46
Sub-Total Commercial Retail Reduction				16,898		388			230	159		1,696			830	866
TOTAL REDUCTION				1,404		147			95	52		169			77	92

Notes:

* = Source: City of San Diego Trip Generation Manual, May 2003

[1] = Cinema trip rate is based on ITE's Trip Generation, 8th edition, Land Use 443. Phasing options for a cinema ranging from 8 to 10 screens is discussed in Section 17.0

DU = Dwelling Unit

KSF = 1,000 Square Foot

Rm = Room

One Paseo Trip Generation Table
(Project Buildout)
70 vs. 40 Analysis
NET NEW TRIPS

Condition	ADT	AM Peak Hour			PM Peak Hour		
		#	In	Out	#	In	Out
Proposed Project	28,984	1,704	1,163	540	3,162	1,339	1,824
Mixed Use Reductions	1,404	147	95	52	169	77	92
TOTAL	27,580	1,556	1,068	489	2,994	1,262	1,732

Notes:

* = Source: City of San Diego Trip Generation Manual, May 2003

70 vs. 40 Analysis

Existing With & Without Project (Phase 1) Street Segment Comparison

Road	Segment	Class.	Existing			Existing + Project (Phase 1)			ΔV/C	Is this impact Significant?
			LOS	Volume	V/C	LOS	Volume	V/C		
Del Mar Heights Rd.	Mango Drive to Portofino Drive	5-M	B	21,314	0.474	B	22,476	0.499	0.026	*NO*
	Portofino Drive to I-5 Southbound Ramps	5-PA	C	36,086	0.722	C	37,635	0.753	0.031	*NO*
	I-5 SB Ramps and I-5 NB Ramps	5-PA	D	40,090	0.802	D	42,800	0.856	0.054	*NO*
	I-5 Northbound Ramps to High Bluff Drive	PA	D	51,625	0.860	E	56,659	0.944	0.084	*YES*
	High Bluff Drive to Third Avenue	PA	C	37,910	0.632	C	43,718	0.729	0.097	*NO*
	Third Avenue to First Avenue	PA	C	37,910	0.632	C	42,427	0.707	0.075	*NO*
	First Avenue to El Camino Real	PA	C	37,910	0.632	C	41,137	0.686	0.054	*NO*
	El Camino Real to Carmel Country Road	PA	B	32,674	0.545	C	36,159	0.603	0.058	*NO*
	Carmel Country Road to Torrey Ridge Road	PA	A	21,658	0.361	A	23,336	0.389	0.028	*NO*
	Torrey Ridge Road to Lansdale Drive	PA	A	19,071	0.318	A	20,233	0.337	0.019	*NO*
	Lansdale Drive to Carmel Canyon Road	PA	A	15,188	0.253	A	15,833	0.264	0.011	*NO*
El Camino Real	Via de la Valle to San Dieguito Road	2-Ca	F	15,579	1.039	F	15,966	1.064	0.026	*YES*
	San Dieguito Road to Derby Downs Road	4-M	A	13,915	0.348	A	14,431	0.361	0.013	*NO*
	Derby Downs Road to Half Mile Drive	4-M	B	15,333	0.383	B	15,849	0.396	0.013	*NO*
	Half Mile Drive to Quarter Mile Drive	4-M	A	13,516	0.338	A	14,161	0.354	0.016	*NO*
	Quarter Mile Drive to Del Mar Heights Road	4-M	A	14,925	0.373	B	15,699	0.392	0.019	*NO*
	Del Mar Heights Road to Townsgate Drive	6-M	A	14,731	0.295	A	16,667	0.333	0.039	*NO*
	Townsgate Drive to High Bluff Drive	6-M	A	15,425	0.309	A	17,103	0.342	0.034	*NO*
	High Bluff Drive to Valley Centre Drive	6-M	A	19,364	0.387	B	20,526	0.411	0.023	*NO*
	Valley Centre Drive to Carmel Valley Road	5-M	C	27,589	0.613	C	28,363	0.630	0.017	*NO*
Carmel Country Road	Del Mar Heights Road to Townsgate Drive	4-M	B	15,932	0.398	B	17,223	0.431	0.032	*NO*
	Townsgate Drive to Carmel Creek Road	4-M	A	13,878	0.347	A	14,911	0.373	0.026	*NO*
	Carmel Creek Road to Carmel Canyon Road	4-M	A	13,137	0.328	A	13,782	0.345	0.016	*NO*
	Carmel Canyon Road to SR-56 WB Ramps	4-M	B	20,553	0.514	C	21,069	0.527	0.013	*NO*
Carmel Canyon Road	Del Mar Heights Road to Carmel Country Rd.	4-M	A	12,224	0.306	A	12,482	0.312	0.006	*NO*
Carmel Creek Road	Carmel Country Road to Carmel Grove Road	4-M	A	11,206	0.280	A	11,593	0.290	0.010	*NO*
	Carmel Grove Road to SR-56 WB Ramps	4-M	A	14,862	0.372	B	15,249	0.381	0.010	*NO*
Valley Centre Drive	Carmel View Road to Carmel Creek Road	4-C	B	10,875	0.363	B	11,004	0.367	0.004	*NO*
Carmel Valley Road	I-5 Northbound Ramps to El Camino Real	PA	C	43,375	0.723	C	43,633	0.727	0.004	*NO*
High Bluff Drive	Del Mar Heights Road to El Camino Real	2-Ca	C	9,842	0.656	D	10,229	0.682	0.026	*NO*
Via de la Valle	San Andres Drive to El Camino Real (W)	2-Cb	F	24,400	2.440	F	24,658	2.466	0.026	*YES*

Legend:

LOS= Level of Service

V/C= Volume to Capacity Ratio

ΔV/C= Change in V/C ratio

70 vs. 40 Analysis

Existing With & Without Project (Phase 1 & 2) Street Segment Comparison

Road	Segment	Class.	Existing			Existing + Project (Phase 1 & 2)			ΔV/C	Is this impact Significant?
			LOS	Volume	V/C	LOS	Volume	V/C		
Del Mar Heights Rd.	Mango Drive to Portofino Drive	5-M	B	21,314	0.474	B	22,973	0.511	0.037	*NO*
	Portofino Drive to I-5 Southbound Ramps	5-PA	C	36,086	0.722	C	38,298	0.766	0.044	*NO*
	I-5 SB Ramps and I-5 NB Ramps	5-PA	D	40,090	0.802	D	43,961	0.879	0.077	*NO*
	I-5 Northbound Ramps to High Bluff Drive	PA	D	51,625	0.860	E	58,813	0.980	0.120	*YES*
	High Bluff Drive to Third Avenue	PA	C	37,910	0.632	C	46,204	0.770	0.138	*NO*
	Third Avenue to First Avenue	PA	C	37,910	0.632	C	43,255	0.721	0.089	*NO*
	First Avenue to El Camino Real	PA	C	37,910	0.632	C	43,255	0.721	0.089	*NO*
	El Camino Real to Carmel Country Road	PA	B	32,674	0.545	C	37,650	0.628	0.083	*NO*
	Carmel Country Road to Torrey Ridge Road	PA	A	21,658	0.361	A	24,054	0.401	0.040	*NO*
	Torrey Ridge Road to Lansdale Drive	PA	A	19,071	0.318	A	20,730	0.345	0.028	*NO*
	Lansdale Drive to Carmel Canyon Road	PA	A	15,188	0.253	A	16,110	0.268	0.015	*NO*
El Camino Real	Via de la Valle to San Dieguito Road	2-Ca	F	15,579	1.039	F	16,132	1.075	0.037	*YES*
	San Dieguito Road to Derby Downs Road	4-M	A	13,915	0.348	A	14,652	0.366	0.018	*NO*
	Derby Downs Road to Half Mile Drive	4-M	B	15,333	0.383	B	16,070	0.402	0.018	*NO*
	Half Mile Drive to Quarter Mile Drive	4-M	A	13,516	0.338	A	14,438	0.361	0.023	*NO*
	Quarter Mile Drive to Del Mar Heights Road	4-M	A	14,925	0.373	B	16,031	0.401	0.028	*NO*
	Del Mar Heights Road to Townsgate Drive	6-M	A	14,731	0.295	A	17,496	0.350	0.055	*NO*
	Townsgate Drive to High Bluff Drive	6-M	A	15,425	0.309	A	17,821	0.356	0.048	*NO*
	High Bluff Drive to Valley Centre Drive	6-M	A	19,364	0.387	B	21,023	0.420	0.033	*NO*
	Valley Centre Drive to Carmel Valley Road	5-M	C	27,589	0.613	C	28,695	0.638	0.025	*NO*
Carmel Country Road	Del Mar Heights Road to Townsgate Drive	4-M	B	15,932	0.398	B	17,775	0.444	0.046	*NO*
	Townsgate Drive to Carmel Creek Road	4-M	A	13,878	0.347	B	15,352	0.384	0.037	*NO*
	Carmel Creek Road to Carmel Canyon Road	4-M	A	13,137	0.328	A	14,059	0.351	0.023	*NO*
	Carmel Canyon Road to SR-56 WB Ramps	4-M	B	20,553	0.514	C	21,290	0.532	0.018	*NO*
Carmel Canyon Road	Del Mar Heights Road to Carmel Country Rd.	4-M	A	12,224	0.306	A	12,593	0.315	0.009	*NO*
Carmel Creek Road	Carmel Country Road to Carmel Grove Road	4-M	A	11,206	0.280	A	11,759	0.294	0.014	*NO*
	Carmel Grove Road to SR-56 WB Ramps	4-M	A	14,862	0.372	B	15,415	0.385	0.014	*NO*
Valley Centre Drive	Carmel View Road to Carmel Creek Road	4-C	B	10,875	0.363	B	11,059	0.369	0.006	*NO*
Carmel Valley Road	I-5 Northbound Ramps to El Camino Real	PA	C	43,375	0.723	C	43,744	0.729	0.006	*NO*
High Bluff Drive	Del Mar Heights Road to El Camino Real	2-Ca	C	9,842	0.656	D	10,395	0.693	0.037	*NO*
Via de la Valle	San Andres Drive to El Camino Real (W)	2-Cb	F	24,400	2.440	F	24,769	2.477	0.037	*YES*

Legend:

LOS= Level of Service

V/C= Volume to Capacity Ratio

ΔV/C= Change in V/C ratio

70 vs. 40 Analysis

Existing With & Without Project (Buildout) Street Segment Comparison

Road	Segment	Class.	Existing			Existing + Project (Buildout)			ΔV/C	Is this impact Significant?
			LOS	Volume	V/C	LOS	Volume	V/C		
Del Mar Heights Rd.	Mango Drive to Portofino Drive	5-M	B	21,314	0.474	B	23,796	0.529	0.055	*NO*
	Portofino Drive to I-5 Southbound Ramps	5-PA	C	36,086	0.722	C	39,396	0.788	0.066	*NO*
	I-5 SB Ramps and I-5 NB Ramps	5-PA	D	40,090	0.802	E	45,882	0.918	0.116	*YES*
	I-5 Northbound Ramps to High Bluff Drive	PA	D	51,625	0.860	F	62,381	1.040	0.179	*YES*
	High Bluff Drive to Third Avenue	PA	C	37,910	0.632	D	50,321	0.839	0.207	*NO*
	Third Avenue to First Avenue	PA	C	37,910	0.632	C	45,908	0.765	0.133	*NO*
	First Avenue to El Camino Real	PA	C	37,910	0.632	C	45,908	0.765	0.133	*NO*
	El Camino Real to Carmel Country Road	PA	B	32,674	0.545	C	40,121	0.669	0.124	*NO*
	Carmel Country Road to Torrey Ridge Road	PA	A	21,658	0.361	B	25,243	0.421	0.060	*NO*
	Torrey Ridge Road to Lansdale Drive	PA	A	19,071	0.318	A	21,553	0.359	0.041	*NO*
	Lansdale Drive to Carmel Canyon Road	PA	A	15,188	0.253	A	16,567	0.276	0.023	*NO*
El Camino Real	Via de la Valle to San Dieguito Road	2-Ca	F	15,579	1.039	F	16,406	1.094	0.055	*YES*
	San Dieguito Road to Derby Downs Road	4-M	A	13,915	0.348	B	15,018	0.375	0.028	*NO*
	Derby Downs Road to Half Mile Drive	4-M	B	15,333	0.383	B	16,436	0.411	0.028	*NO*
	Half Mile Drive to Quarter Mile Drive	4-M	A	13,516	0.338	A	14,895	0.372	0.034	*NO*
	Quarter Mile Drive to Del Mar Heights Road	4-M	A	14,925	0.373	B	16,580	0.414	0.041	*NO*
	Del Mar Heights Road to Townsgate Drive	6-M	A	14,731	0.295	B	20,247	0.405	0.110	*NO*
	Townsgate Drive to High Bluff Drive	6-M	A	15,425	0.309	A	19,010	0.380	0.072	*NO*
	High Bluff Drive to Valley Centre Drive	6-M	A	19,364	0.387	B	21,846	0.437	0.050	*NO*
	Valley Centre Drive to Carmel Valley Road	5-M	C	27,589	0.613	C	29,244	0.650	0.037	*NO*
Carmel Country Road	Del Mar Heights Road to Townsgate Drive	4-M	B	15,932	0.398	B	18,690	0.467	0.069	*NO*
	Townsgate Drive to Carmel Creek Road	4-M	A	13,878	0.347	B	16,084	0.402	0.055	*NO*
	Carmel Creek Road to Carmel Canyon Road	4-M	A	13,137	0.328	A	14,516	0.363	0.034	*NO*
	Carmel Canyon Road to SR-56 WB Ramps	4-M	B	20,553	0.514	C	21,656	0.541	0.028	*NO*
Carmel Canyon Road	Del Mar Heights Road to Carmel Country Rd.	4-M	A	12,224	0.306	A	12,776	0.319	0.014	*NO*
Carmel Creek Road	Carmel Country Road to Carmel Grove Road	4-M	A	11,206	0.280	A	12,033	0.301	0.021	*NO*
	Carmel Grove Road to SR-56 WB Ramps	4-M	A	14,862	0.372	B	15,689	0.392	0.021	*NO*
Valley Centre Drive	Carmel View Road to Carmel Creek Road	4-C	B	10,875	0.363	B	11,151	0.372	0.009	*NO*
Carmel Valley Road	I-5 Northbound Ramps to El Camino Real	PA	C	43,375	0.723	C	43,927	0.732	0.009	*NO*
High Bluff Drive	Del Mar Heights Road to El Camino Real	2-Ca	C	9,842	0.656	D	10,669	0.711	0.055	*NO*
Via de la Valle	San Andres Drive to El Camino Real (W)	2-Cb	F	24,400	2.440	F	24,952	2.495	0.055	*YES*

Legend:

LOS= Level of Service

V/C= Volume to Capacity Ratio

ΔV/C= Change in V/C ratio

TABLE X-X

Existing & Existing + Project (Phase 1) Intersection Summary
70/40 Analysis

#	Intersection	Existing				Existing + Project (Phase 1)							
		AM Peak Hour		PM Peak Hour		AM Peak Hour		Δ	S ?	PM Peak Hour		Δ	S ?
		D	LOS	D	LOS	D	LOS			D	LOS		
1	El Camino Real / Via de la Valle	27.7	C	30.0	C	28.4	C	0.7	No	31.1	C	1.1	No
2	El Camino Real / San Dieguito Road	16.6	B	23.8	C	16.8	B	0.2	No	25.3	C	1.5	No
3	El Camino Real / Derby Downs Road	4.3	A	3.3	A	4.3	A	0.0	No	4.8	A	1.5	No
4	El Camino Real / Half Mile Drive	19.6	B	16.8	B	20.5	C	0.9	No	20.0	B	3.2	No
5	El Camino Real / Quarter Mile Drive	20.0	B	14.0	B	20.1	C	0.1	No	16.0	B	2.0	No
6	Del Mar Heights Road / Mango Drive	31.7	C	29.7	C	32.9	C	1.2	No	32.2	C	2.5	No
7	Del Mar Heights Road / Portofino Drive	9.3	A	9.1	A	9.5	A	0.2	No	9.2	A	0.1	No
8	Del Mar Heights Road / I-5 SB Ramps	11.7	B	12.6	B	27.0	C	15.3	No	27.0	C	14.4	No
9	Del Mar Heights Road / I-5 NB Ramps	21.6	C	24.9	C	36.2	D	14.6	No	38.3	D	13.4	No
10	Del Mar Heights Road / High Bluff Drive	26.1	C	28.9	C	26.8	C	0.7	No	35.8	D	6.9	No
11	Del Mar Heights Road / Third Avenue	DNE	DNE	DNE	DNE	5.5	A	N/A	No	12.7	B	N/A	No
12	Del Mar Heights Road / First Avenue	DNE	DNE	DNE	DNE	4.6	A	N/A	No	12.1	B	N/A	No
13	Del Mar Heights Road / El Camino Real	27.2	C	26.9	C	30.2	C	3.0	No	31.2	C	4.3	No
14	Del Mar Heights Road / Carmel Country Rd	22.1	C	24.3	C	25.7	C	3.6	No	24.8	C	0.5	No
15	Del Mar Heights Road / Torrey Ridge Drive	22.7	C	14.9	B	25.5	C	2.8	No	16.8	B	1.9	No
16	Del Mar Heights Road / Lansdale Drive	20.4	C	19.8	B	21.7	C	1.3	No	19.9	B	0.1	No
17	Del Mar Heights Road / Carmel Canyon Rd	13.4	B	9.8	A	13.6	B	0.2	No	9.8	A	0.0	No
18	El Camino Real / Del Mar Highlands Town Ctr.	7.2	A	12.4	B	13.9	B	6.7	No	28.9	C	16.5	No
19	Carmel Country Road / Townsgate Drive	25.8	C	20.2	C	26.4	C	0.6	No	21.8	C	1.6	No
20	El Camino Real / Townsgate Drive	18.2	B	13.0	B	18.5	B	0.3	No	13.6	B	0.6	No
21	Carmel Country Road / Carmel Creek Rd	45.3	D	23.2	C	47.1	D	1.8	No	23.7	C	0.5	No
22	El Camino Real / High Bluff Drive	25.2	C	27.9	C	25.5	C	0.3	No	29.5	C	1.6	No
23	Carmel View Road / High Bluff Drive	8.3	A	9.0	A	8.6	A	0.3	No	9.4	A	0.4	No
24	Carmel Creek Road / Carmel Grove Rd	26.8	C	17.2	B	26.8	C	0.0	No	17.2	B	0.0	No
25	Carmel Valley Road / I-5 SB Ramps	19.6	B	27.0	C	20.0	B	0.4	No	27.8	C	0.8	No
26	Carmel Valley Road / I-5 NB Ramps	12.6	B	18.2	B	12.6	B	0.0	No	18.3	B	0.1	No
27	El Camino Real / Valley Centre Drive	20.9	C	19.7	B	21.0	C	0.1	No	20.2	C	0.5	No
28	El Camino Real / Carmel Valley Rd	14.0	B	16.8	B	14.5	B	0.5	No	17.1	B	0.3	No
29	El Camino Real / SR-56 EB On Ramp	15.4	B	24.4	C	15.6	B	0.2	No	25.4	C	1.0	No
30	Carmel View Road / Valley Centre Drive	6.7	A	7.8	A	6.7	A	0.0	No	7.8	A	0.0	No
31	Carmel Creek Road / SR-56 WB Ramp	37.0	D	20.7	C	38.9	D	1.9	No	21.4	C	0.7	No
32	Carmel Creek Road / SR-56 EB Ramps	11.6	B	19.5	B	11.8	B	0.2	No	19.5	B	0.0	No
33	Carmel Country Road / Carmel Canyon Rd	31.9	C	23.2	C	32.1	C	0.2	No	25.1	C	1.9	No
34	Carmel Country Road / SR-56 WB Ramps	15.7	B	10.9	B	15.9	B	0.2	No	11.3	B	0.4	No
35	Carmel Country Road / SR-56 EB Ramps	13.4	B	11.5	B	13.4	B	0.0	No	11.8	B	0.3	No
36	Carmel Creek Road / Del Mar Trail	41.6	E	20.1	C	43.1	E	1.5	No	20.4	C	0.3	No

Notes:

LOS = Level of Service

Δ = Change

S = Significant

D= Delay

TABLE X-X

Existing & Existing + Project (Phase 1 & 2) Intersection Summary
70/40 Analysis

#	Intersection	Existing				Existing + Project (Phase 1 & 2)							
		AM Peak Hour		PM Peak Hour		AM Peak Hour		Δ	S ?	PM Peak Hour		Δ	S ?
		D	LOS	D	LOS	D	LOS			D	LOS		
1	El Camino Real / Via de la Valle	27.7	C	30.0	C	28.4	C	0.7	No	32.7	C	2.7	No
2	El Camino Real / San Dieguito Road	16.6	B	23.8	C	16.9	B	0.3	No	25.8	C	2.0	No
3	El Camino Real / Derby Downs Road	4.3	A	3.3	A	4.3	A	0.0	No	4.8	A	1.5	No
4	El Camino Real / Half Mile Drive	19.6	B	16.8	B	20.6	C	1.0	No	21.5	C	4.7	No
5	El Camino Real / Quarter Mile Drive	20.0	B	14.0	B	20.1	C	0.1	No	17.1	B	3.1	No
6	Del Mar Heights Road / Mango Drive	31.7	C	29.7	C	33.0	C	1.3	No	33.6	C	3.9	No
7	Del Mar Heights Road / Portofino Drive	9.3	A	9.1	A	9.5	A	0.2	No	9.3	A	0.2	No
8	Del Mar Heights Road / I-5 SB Ramps	11.7	B	12.6	B	27.0	C	15.3	No	27.4	C	14.8	No
9	Del Mar Heights Road / I-5 NB Ramps	21.6	C	24.9	C	37.3	D	15.7	No	41.7	D	16.8	No
10	Del Mar Heights Road / High Bluff Drive	26.1	C	28.9	C	26.9	C	0.8	No	40.8	D	11.9	No
11	Del Mar Heights Road / Third Avenue	DNE	DNE	DNE	DNE	5.9	A	N/A	No	13.3	B	N/A	No
12	Del Mar Heights Road / First Avenue	DNE	DNE	DNE	DNE	5.7	A	N/A	No	13.8	B	N/A	No
13	Del Mar Heights Road / El Camino Real	27.2	C	26.9	C	31.5	C	4.3	No	37.2	D	10.3	No
14	Del Mar Heights Road / Carmel Country Rd	22.1	C	24.3	C	25.5	C	3.4	No	25.8	C	1.5	No
15	Del Mar Heights Road / Torrey Ridge Drive	22.7	C	14.9	B	25.2	C	2.5	No	14.9	B	0.0	No
16	Del Mar Heights Road / Lansdale Drive	20.4	C	19.8	B	20.6	C	0.2	No	21.3	C	1.5	No
17	Del Mar Heights Road / Carmel Canyon Rd	13.4	B	9.8	A	13.6	B	0.2	No	9.9	A	0.1	No
18	El Camino Real / Del Mar Highlands Town Ctr.	7.2	A	12.4	B	15.5	B	8.3	No	26.3	C	13.9	No
19	Carmel Country Road / Townsgate Drive	25.8	C	20.2	C	26.6	C	0.8	No	22.2	C	2.0	No
20	El Camino Real / Townsgate Drive	18.2	B	13.0	B	18.6	B	0.4	No	13.8	B	0.8	No
21	Carmel Country Road / Carmel Creek Rd	45.3	D	23.2	C	47.8	D	2.5	No	24.1	C	0.9	No
22	El Camino Real / High Bluff Drive	25.2	C	27.9	C	25.9	C	0.7	No	31.2	C	3.3	No
23	Carmel View Road / High Bluff Drive	8.3	A	9.0	A	8.6	A	0.3	No	9.6	A	0.6	No
24	Carmel Creek Road / Carmel Grove Rd	26.8	C	17.2	B	27.5	C	0.7	No	17.3	B	0.1	No
25	Carmel Valley Road / I-5 SB Ramps	19.6	B	27.0	C	20.1	C	0.5	No	27.9	C	0.9	No
26	Carmel Valley Road / I-5 NB Ramps	12.6	B	18.2	B	12.6	B	0.0	No	18.4	B	0.2	No
27	El Camino Real / Valley Centre Drive	20.9	C	19.7	B	21.0	C	0.1	No	20.2	C	0.5	No
28	El Camino Real / Carmel Valley Rd	14.0	B	16.8	B	14.5	B	0.5	No	17.2	B	0.4	No
29	El Camino Real / SR-56 EB On Ramp	15.4	B	24.4	C	15.8	B	0.4	No	26.1	C	1.7	No
30	Carmel View Road / Valley Centre Drive	6.7	A	7.8	A	6.7	A	0.0	No	7.8	A	0.0	No
31	Carmel Creek Road / SR-56 WB Ramp	37.0	D	20.7	C	39.0	D	2.0	No	21.5	C	0.8	No
32	Carmel Creek Road / SR-56 EB Ramps	11.6	B	19.5	B	11.8	B	0.2	No	19.6	B	0.1	No
33	Carmel Country Road / Carmel Canyon Rd	31.9	C	23.2	C	32.1	C	0.2	No	25.3	C	2.1	No
34	Carmel Country Road / SR-56 WB Ramps	15.7	B	10.9	B	15.8	B	0.1	No	11.3	B	0.4	No
35	Carmel Country Road / SR-56 EB Ramps	13.4	B	11.5	B	13.4	B	0.0	No	11.9	B	0.4	No
36	Carmel Creek Road / Del Mar Trail	41.6	E	20.1	C	43.8	E	2.2	Yes	21.1	C	1.0	No

Notes:

LOS = Level of Service

Δ = Change

S = Significant

D= Delay

TABLE X-X

Existing & Existing + Project (Buildout) Intersection Summary

#	Intersection	Existing				Existing + Project (Buildout)							
		AM Peak Hour		PM Peak Hour		AM Peak Hour		Δ	S ?	PM Peak Hour		Δ	S ?
		D	LOS	D	LOS	D	LOS			D	LOS		
1	El Camino Real / Via de la Valle	27.7	C	30.0	C	28.7	C	1.0	No	33.5	C	3.5	No
2	El Camino Real / San Dieguito Road	16.6	B	23.8	C	17.0	B	0.4	No	26.5	C	2.7	No
3	El Camino Real / Derby Downs Road	4.3	A	3.3	A	4.3	A	0.0	No	4.8	A	1.5	No
4	El Camino Real / Half Mile Drive	19.6	B	16.8	B	20.9	C	1.3	No	23.3	C	6.5	No
5	El Camino Real / Quarter Mile Drive	20.0	B	14.0	B	20.4	C	0.4	No	15.3	B	1.3	No
6	Del Mar Heights Road / Mango Drive	31.7	C	29.7	C	33.7	C	2.0	No	35.3	D	5.6	No
7	Del Mar Heights Road / Portofino Drive	9.3	A	9.1	A	9.6	A	0.3	No	9.4	A	0.3	No
8	Del Mar Heights Road / I-5 SB Ramps	11.7	B	12.6	B	27.2	C	15.5	No	28.2	C	15.6	No
9	Del Mar Heights Road / I-5 NB Ramps	21.6	C	24.9	C	39.5	D	17.9	No	49.5	D	24.6	No
10	Del Mar Heights Road / High Bluff Drive	26.1	C	28.9	C	30.0	C	3.9	No	46.6	D	17.7	No
11	Del Mar Heights Road / Third Avenue	DNE	DNE	DNE	DNE	7.4	A	N/A	No	18.6	B	N/A	No
12	Del Mar Heights Road / First Avenue	DNE	DNE	DNE	DNE	7.0	A	N/A	No	19.8	B	N/A	No
13	Del Mar Heights Road / El Camino Real	27.2	C	26.9	C	33.6	C	6.4	No	46.3	D	19.4	No
14	Del Mar Heights Road / Carmel Country Rd	22.1	C	24.3	C	26.6	C	4.5	No	27.6	C	3.3	No
15	Del Mar Heights Road / Torrey Ridge Drive	22.7	C	14.9	B	25.4	C	2.7	No	15.7	B	0.8	No
16	Del Mar Heights Road / Lansdale Drive	20.4	C	19.8	B	21.0	C	0.6	No	22.2	C	2.4	No
17	Del Mar Heights Road / Carmel Canyon Rd	13.4	B	9.8	A	13.6	B	0.2	No	10.0	A	0.2	No
18	El Camino Real / Del Mar Highlands Town Ctr.	7.2	A	12.4	B	18.6	B	11.4	No	28.8	C	16.4	No
19	Carmel Country Road / Townsgate Drive	25.8	C	20.2	C	26.9	C	1.1	No	22.8	C	2.6	No
20	El Camino Real / Townsgate Drive	18.2	B	13.0	B	18.8	B	0.6	No	14.1	B	1.1	No
21	Carmel Country Road / Carmel Creek Rd	45.3	D	23.2	C	49.0	D	3.7	No	25.1	C	1.9	No
22	El Camino Real / High Bluff Drive	25.2	C	27.9	C	25.8	C	0.6	No	34.9	C	7.0	No
23	Carmel View Road / High Bluff Drive	8.3	A	9.0	A	8.7	A	0.4	No	9.8	A	0.8	No
24	Carmel Creek Road / Carmel Grove Rd	26.8	C	17.2	B	27.7	C	0.9	No	17.3	B	0.1	No
25	Carmel Valley Road / I-5 SB Ramps	19.6	B	27.0	C	20.1	C	0.5	No	28.1	C	1.1	No
26	Carmel Valley Road / I-5 NB Ramps	12.6	B	18.2	B	12.6	B	0.0	No	18.5	B	0.3	No
27	El Camino Real / Valley Centre Drive	20.9	C	19.7	B	21.1	C	0.2	No	20.2	C	0.5	No
28	El Camino Real / Carmel Valley Rd	14.0	B	16.8	B	14.5	B	0.5	No	17.3	B	0.5	No
29	El Camino Real / SR-56 EB On Ramp	15.4	B	24.4	C	16.1	B	0.7	No	26.5	C	2.1	No
30	Carmel View Road / Valley Centre Drive	6.7	A	7.8	A	6.7	A	0.0	No	7.8	A	0.0	No
31	Carmel Creek Road / SR-56 WB Ramp	37.0	D	20.7	C	39.4	D	2.4	No	21.6	C	0.9	No
32	Carmel Creek Road / SR-56 EB Ramps	11.6	B	19.5	B	11.7	B	0.1	No	19.7	B	0.2	No
33	Carmel Country Road / Carmel Canyon Rd	31.9	C	23.2	C	32.3	C	0.4	No	25.6	C	2.4	No
34	Carmel Country Road / SR-56 WB Ramps	15.7	B	10.9	B	15.8	B	0.1	No	11.4	B	0.5	No
35	Carmel Country Road / SR-56 EB Ramps	13.4	B	11.5	B	13.4	B	0.0	No	12.1	B	0.6	No
36	Carmel Creek Road / Del Mar Trail	41.6	E	20.1	C	45.4	E	3.8	Yes	22.3	C	2.2	No

Notes:

LOS = Level of Service

Δ = Change

S = Significant

D= Delay

70 vs. 40 Analysis
Existing & Existing + Project (Phase 1)
Freeway Level of Service Summary

Segment	Dir.	Existing		Existing + Project (Phase 1)		Δ	Sig.?
		V/C	LOS	V/C	LOS		
I-5							
Lomas Santa Fe Drive / Via De La Valle	NB	0.6319	C	0.6345	C	0.0026	NO
Lomas Santa Fe Drive / Via De La Valle	SB	0.6523	C	0.6550	C	0.0027	NO
Via De La Valle/Del Mar Heights Rd.	NB	0.6447	C	0.6479	C	0.0031	NO
Via De La Valle/Del Mar Heights Rd.	SB	0.6655	C	0.6688	C	0.0032	NO
Del Mar Heights Rd./ SR-56	NB	0.5565	B	0.5618	B	0.0054	NO
Del Mar Heights Rd./ SR-56	SB	0.5744	B	0.5799	B	0.0055	NO
SR-56/ Carmel Mountain Road	NB	0.5746	B	0.5772	B	0.0026	NO
SR-56/ Carmel Mountain Road	SB	0.6290	C	0.6318	C	0.0028	NO
Carmel Mountain Road/ I-805 Merge	NB	0.5582	B	0.5602	B	0.0020	NO
Carmel Mountain Road/ I-805 Merge	SB	0.5482	B	0.5502	B	0.0020	NO
SR-56							
El Camino Real / Carmel Creek Rd.	EB	0.7359	C	0.8007	D	0.0648	NO
El Camino Real / Carmel Creek Rd.	WB	0.7546	C	0.8211	D	0.0665	NO
Carmel Creek Rd. / Carmel Country Rd.	EB	0.6904	C	0.7514	C	0.0610	NO
Carmel Creek Rd. / Carmel Country Rd.	WB	0.7080	C	0.7705	C	0.0625	NO

Legend:

Dir.= Direction
V/C= Volume to Capacity Ratio
LOS= Level of Service
Sig.?= Is this significant?

70 vs. 40 Analysis

Existing & Existing + Project (Phase 1 & 2)

Freeway Level of Service Summary

Segment	Dir.	Existing		Existing + Project (Phase 1 & 2)		Δ	Sig.?
		V/C	LOS	V/C	LOS		
I-5							
Lomas Santa Fe Drive / Via De La Valle	NB	0.6319	C	0.6356	C	0.0037	NO
Lomas Santa Fe Drive / Via De La Valle	SB	0.6523	C	0.6561	C	0.0038	NO
Via De La Valle/Del Mar Heights Rd.	NB	0.6447	C	0.6492	C	0.0045	NO
Via De La Valle/Del Mar Heights Rd.	SB	0.6655	C	0.6702	C	0.0046	NO
Del Mar Heights Rd./ SR-56	NB	0.5565	B	0.5641	B	0.0077	NO
Del Mar Heights Rd./ SR-56	SB	0.5744	B	0.5823	B	0.0079	NO
SR-56/ Carmel Mountain Road	NB	0.5746	B	0.5783	B	0.0037	NO
SR-56/ Carmel Mountain Road	SB	0.6290	C	0.6331	C	0.0040	NO
Carmel Mountain Road/ I-805 Merge	NB	0.5582	B	0.5611	B	0.0029	NO
Carmel Mountain Road/ I-805 Merge	SB	0.5482	B	0.5510	B	0.0028	NO
SR-56							
El Camino Real / Carmel Creek Rd.	EB	0.7359	C	0.8018	D	0.0659	NO
El Camino Real / Carmel Creek Rd.	WB	0.7546	C	0.8222	D	0.0676	NO
Carmel Creek Rd. / Carmel Country Rd.	EB	0.6904	C	0.7525	C	0.0621	NO
Carmel Creek Rd. / Carmel Country Rd.	WB	0.7080	C	0.7717	C	0.0636	NO

Legend:

Dir.= Direction
V/C= Volume to Capacity Ratio
LOS= Level of Service
Sig.?= Is this significant?

70 vs. 40 Analysis

Existing & Existing + Project (Buildout)

Freeway Level of Service Summary

Segment	Dir.	Existing		Existing + Project (Buildout)		Δ	Sig.?
		V/C	LOS	V/C	LOS		
I-5							
Lomas Santa Fe Drive / Via De La Valle	NB	0.6319	C	0.6365	C	0.0046	NO
Lomas Santa Fe Drive / Via De La Valle	SB	0.6523	C	0.6570	C	0.0047	NO
Via De La Valle/Del Mar Heights Rd.	NB	0.6447	C	0.6503	C	0.0056	NO
Via De La Valle/Del Mar Heights Rd.	SB	0.6655	C	0.6713	C	0.0058	NO
Del Mar Heights Rd./ SR-56	NB	0.5565	B	0.5660	B	0.0095	NO
Del Mar Heights Rd./ SR-56	SB	0.5744	B	0.5843	B	0.0099	NO
SR-56/ Carmel Mountain Road	NB	0.5746	B	0.5792	B	0.0046	NO
SR-56/ Carmel Mountain Road	SB	0.6290	C	0.6340	C	0.0050	NO
Carmel Mountain Road/ I-805 Merge	NB	0.5582	B	0.5618	B	0.0036	NO
Carmel Mountain Road/ I-805 Merge	SB	0.5482	B	0.5517	B	0.0035	NO
SR-56							
El Camino Real / Carmel Creek Rd.	EB	0.7359	C	0.8026	D	0.0668	NO
El Camino Real / Carmel Creek Rd.	WB	0.7546	C	0.8231	D	0.0685	NO
Carmel Creek Rd. / Carmel Country Rd.	EB	0.6904	C	0.7534	C	0.0629	NO
Carmel Creek Rd. / Carmel Country Rd.	WB	0.7080	C	0.7726	C	0.0646	NO

Legend:

Dir.= Direction
V/C= Volume to Capacity Ratio
LOS= Level of Service
Sig.?= Is this significant?

TABLE X-X

Existing With Project (Phase 1) Freeway Segment LOS Summary

70/40 Analysis

Segment	Lanes	Dir.	Cap.	ADT	Peak Hour %	Dir. Split	Truck Factor	PHV	V/C	LOS
I-5										
Lomas Santa Fe Drive / Via De La Valle	4-GP + 1-AX + 1-HOV	NB	12,800	222,903	0.068	0.53	0.98	8,122	0.635	C
Lomas Santa Fe Drive / Via De La Valle	4-GP + 1-AX + 1-HOV	SB	12,800	222,903	0.067	0.55	0.98	8,384	0.655	C
Via De La Valle/Del Mar Heights Rd.	5-GP+1-M	NB	13,450	239,162	0.068	0.53	0.98	8,714	0.648	C
Via De La Valle/Del Mar Heights Rd.	5-GP+1-M	SB	13,450	239,162	0.067	0.55	0.98	8,995	0.669	C
Del Mar Heights Rd./ SR-56	6-GP+1-M	NB	15,780	243,323	0.068	0.53	0.98	8,866	0.562	B
Del Mar Heights Rd./ SR-56	6-GP+1-M	SB	15,780	243,323	0.067	0.55	0.98	9,152	0.580	B
SR-56/ Carmel Mountain Road	9-GP+1-M	NB	22,830	289,291	0.079	0.57	0.98	13,177	0.577	B
SR-56/ Carmel Mountain Road	8-GP+1-M	SB	20,480	289,291	0.080	0.55	0.98	12,940	0.632	C
Carmel Mountain Road/ I-805 Merge	10	NB	23,500	289,033	0.079	0.57	0.98	13,165	0.560	B
Carmel Mountain Road/ I-805 Merge	10	SB	23,500	289,033	0.080	0.55	0.98	12,929	0.550	B
SR-56										
El Camino Real / Carmel Creek Rd.	2-GP + 1-AX	EB	6,500	81,258	0.093	0.69	0.98	5,204	0.801	D
El Camino Real / Carmel Creek Rd.	2-GP + 1-AX	WB	6,500	81,258	0.094	0.70	0.98	5,337	0.821	D
Carmel Creek Rd. / Carmel Country Rd.	2-GP + 1-AX	EB	6,500	76,258	0.093	0.69	0.98	4,884	0.751	C
Carmel Creek Rd. / Carmel Country Rd.	2-GP + 1-AX	WB	6,500	76,258	0.094	0.70	0.98	5,009	0.771	C

Legend:

Dir.= Direction
Cap. = Capacity
ADT= Average Daily Traffic
V/C= Volume to Capacity Ratio
LOS= Level of Service
PHV= Peak Hour Volume
#-GP= # of General Purpose Lanes
#-M=# of Managed Lanes (Capacity for LOS "C" assumed at 1680 veh/hr/ln taken from Caltrans Guide, December 2002)

Note:

Capacity for LOS "E" roadway is 2,350.
Taken from Transition between LOS"C" and LOS "D" criteria for Basic Freeway Segments @ 65 mi/hr in "Caltrans Guide for the Preparation of Traffic Impact Studies", December 2002

Peak Hour % and Dir. Split taken from Caltrans internet posted Traffic Volumes

TABLE X-X

Existing With Project (Phase 1 & 2) Freeway Segment LOS Summary

70/40 Analysis

Segment	Lanes	Dir.	Cap.	ADT	Peak Hour %	Dir. Split	Truck Factor	PHV	V/C	LOS
I-5										
Lomas Santa Fe Drive / Via De La Valle	4-GP + 1-AX + 1-HOV	NB	12,800	223,290	0.068	0.53	0.98	8,136	0.636	C
Lomas Santa Fe Drive / Via De La Valle	4-GP + 1-AX + 1-HOV	SB	12,800	223,290	0.067	0.55	0.98	8,398	0.656	C
Via De La Valle/Del Mar Heights Rd.	5-GP+1-M	NB	13,450	239,659	0.068	0.53	0.98	8,732	0.649	C
Via De La Valle/Del Mar Heights Rd.	5-GP+1-M	SB	13,450	239,659	0.067	0.55	0.98	9,014	0.670	C
Del Mar Heights Rd./ SR-56	6-GP+1-M	NB	15,780	244,318	0.068	0.53	0.98	8,902	0.564	B
Del Mar Heights Rd./ SR-56	6-GP+1-M	SB	15,780	244,318	0.067	0.55	0.98	9,189	0.582	B
SR-56/ Carmel Mountain Road	9-GP+1-M	NB	22,830	289,843	0.079	0.57	0.98	13,202	0.578	B
SR-56/ Carmel Mountain Road	8-GP+1-M	SB	20,480	289,843	0.080	0.55	0.98	12,965	0.633	C
Carmel Mountain Road/ I-805 Merge	10	NB	23,500	289,474	0.079	0.57	0.98	13,185	0.561	B
Carmel Mountain Road/ I-805 Merge	10	SB	23,500	289,474	0.080	0.55	0.98	12,948	0.551	B
SR-56										
El Camino Real / Carmel Creek Rd.	2-GP + 1-AX	EB	6,500	81,369	0.093	0.69	0.98	5,211	0.802	D
El Camino Real / Carmel Creek Rd.	2-GP + 1-AX	WB	6,500	81,369	0.094	0.70	0.98	5,344	0.822	D
Carmel Creek Rd. / Carmel Country Rd.	2-GP + 1-AX	EB	6,500	76,369	0.093	0.69	0.98	4,891	0.752	C
Carmel Creek Rd. / Carmel Country Rd.	2-GP + 1-AX	WB	6,500	76,369	0.094	0.70	0.98	5,016	0.772	C

Legend:

Dir.= Direction
Cap. = Capacity
ADT= Average Daily Traffic
V/C= Volume to Capacity Ratio
LOS= Level of Service
PHV= Peak Hour Volume
#-GP= # of General Purpose Lanes
#-M=# of Managed Lanes (Capacity for LOS "C" assumed at 1680 veh/hr/ln taken from Caltrans Guide, December 2002)

Note:

Capacity for LOS "E" roadway is 2,350.
Taken from Transition between LOS"C" and LOS "D" criteria for Basic Freeway Segments @ 65 mi/hr in "Caltrans Guide for the Preparation of Traffic Impact Studies", December 2002

Peak Hour % and Dir. Split taken from Caltrans internet posted Traffic Volumes

TABLE X-X

Existing With Project (Buildout) Freeway Segment LOS Summary

70/40 Analysis

Segment	Lanes	Dir.	Cap.	ADT	Peak Hour %	Dir. Split	Truck Factor	PHV	V/C	LOS
I-5										
Lomas Santa Fe Drive / Via De La Valle	4-GP + 1-AX + 1-HOV	NB	12,800	223,607	0.068	0.53	0.98	8,147	0.637	C
Lomas Santa Fe Drive / Via De La Valle	4-GP + 1-AX + 1-HOV	SB	12,800	223,607	0.067	0.55	0.98	8,410	0.657	C
Via De La Valle/Del Mar Heights Rd.	5-GP+1-M	NB	13,450	240,066	0.068	0.53	0.98	8,747	0.650	C
Via De La Valle/Del Mar Heights Rd.	5-GP+1-M	SB	13,450	240,066	0.067	0.55	0.98	9,029	0.671	C
Del Mar Heights Rd./ SR-56	6-GP+1-M	NB	15,780	245,133	0.068	0.53	0.98	8,932	0.566	B
Del Mar Heights Rd./ SR-56	6-GP+1-M	SB	15,780	245,133	0.067	0.55	0.98	9,220	0.584	B
SR-56/ Carmel Mountain Road	9-GP+1-M	NB	22,830	290,296	0.079	0.57	0.98	13,222	0.579	B
SR-56/ Carmel Mountain Road	8-GP+1-M	SB	20,480	290,296	0.080	0.55	0.98	12,985	0.634	C
Carmel Mountain Road/ I-805 Merge	10	NB	23,500	289,837	0.079	0.57	0.98	13,201	0.562	B
Carmel Mountain Road/ I-805 Merge	10	SB	23,500	289,837	0.080	0.55	0.98	12,965	0.552	B
SR-56										
El Camino Real / Carmel Creek Rd.	2-GP + 1-AX	EB	6,500	81,459	0.093	0.69	0.98	5,217	0.803	D
El Camino Real / Carmel Creek Rd.	2-GP + 1-AX	WB	6,500	81,459	0.094	0.70	0.98	5,350	0.823	D
Carmel Creek Rd. / Carmel Country Rd.	2-GP + 1-AX	EB	6,500	76,459	0.093	0.69	0.98	4,897	0.753	C
Carmel Creek Rd. / Carmel Country Rd.	2-GP + 1-AX	WB	6,500	76,459	0.094	0.70	0.98	5,022	0.773	C

Legend:

Dir.= Direction
Cap. = Capacity
ADT= Average Daily Traffic
V/C= Volume to Capacity Ratio
LOS= Level of Service
PHV= Peak Hour Volume
#-GP= # of General Purpose Lanes
#-M=# of Managed Lanes (Capacity for LOS "C" assumed at 1680 veh/hr/ln taken from Caltrans Guide, December 2002)

Note:

Capacity for LOS "E" roadway is 2,350.
Taken from Transition between LOS"C" and LOS "D" criteria for Basic Freeway Segments @ 65 mi/hr in "Caltrans Guide for the Preparation of Traffic Impact Studies", December 2002

Peak Hour % and Dir. Split taken from Caltrans internet posted Traffic Volumes

70/40 Analysis

Existing With & Without Project Ramp Meter Analysis Comparison

(Phase 1)

Most Restrictive Meter Rate

Location		Existing		Existing + Project (Phase 1)		∇	S
		Delay (Min)	Queue (Ft)	Delay (Min)	Queue (Ft)		
Del Mar Heights Rd. / I-5 SB on Ramp (Westbound Loop)	AM	6.20	1,102	8.56	1,523	2.36	NO
	PM	0.00	0	0.00	0	0.00	NO
Del Mar Heights Rd. / I-5 SB on Ramp (Eastbound)	AM	0.00	0	0.00	0	0.00	NO
	PM	0.00	0	0.00	0	0.00	NO
Del Mar Heights Rd. / I-5 NB on Ramp	AM	Meter is not turned on				0.00	NO
	PM	0.00	0	0.00	0	0.00	NO

Notes:

Δ = Change in Delay (minutes)

S = Significant, the allowable increase in delay at a ramp meter with more than 15 minutes delay and freeway LOS E is 2 min.

S = Significant, the allowable increase in delay at a ramp meter with more than 15 minutes delay and freeway LOS F is 1 min.

70/40 Analysis

Existing With & Without Project Ramp Meter Analysis Comparison

(Phase 1 & 2)

Most Restrictive Meter Rate

Location		Existing		Existing + Project (Phase 1 & 2)		∇	S
		Delay (Min)	Queue (Ft)	Delay (Min)	Queue (Ft)		
Del Mar Heights Rd. / I-5 SB on Ramp (Westbound Loop)	AM	6.20	1,102	10.27	1,827	4.08	NO
	PM	0.00	0	0.00	0	0.00	NO
Del Mar Heights Rd. / I-5 SB on Ramp (Eastbound)	AM	0.00	0	0.00	0	0.00	NO
	PM	0.00	0	0.00	0	0.00	NO
Del Mar Heights Rd. / I-5 NB on Ramp	AM	Meter is not turned on				0.00	NO
	PM	0.00	0	0.00	0	0.00	NO

Notes:

Δ = Change in Delay (minutes)

S = Significant, the allowable increase in delay at a ramp meter with more than 15 minutes delay and freeway LOS E is 2 min.

S = Significant, the allowable increase in delay at a ramp meter with more than 15 minutes delay and freeway LOS F is 1 min.

70/40 Analysis

Existing With & Without Project Ramp Meter Analysis Comparison

(Buildout)

Most Restrictive Meter Rate

Location		Existing		Existing + Project (Buildout)		∇	S
		Delay (Min)	Queue (Ft)	Delay (Min)	Queue (Ft)		
Del Mar Heights Rd. / I-5 SB on Ramp (Westbound Loop)	AM	6.20	1,102	13.37	2,378	7.17	NO
	PM	0.00	0	4.81	856	4.81	NO
Del Mar Heights Rd. / I-5 SB on Ramp (Eastbound)	AM	0.00	0	0.00	0	0.00	NO
	PM	0.00	0	0.00	0	0.00	NO
Del Mar Heights Rd. / I-5 NB on Ramp	AM	Meter is not turned on				0.00	NO
	PM	0.00	0	0.05	15	0.05	NO

Notes:

Δ = Change in Delay (minutes)

S = Significant, the allowable increase in delay at a ramp meter with more than 15 minutes delay and freeway LOS E is 2 min.

S = Significant, the allowable increase in delay at a ramp meter with more than 15 minutes delay and freeway LOS F is 1 min.

70/40

TABLE X-X

Existing with Project Ramp Meter Analysis
(Phase 1)

Most Restrictive Meter Rate

Location		Demand (Veh/Hr)	Meter Rate (Veh/Hr)	Excess Demand (Veh/Hr)	Delay (Min)	Queue (Feet)
Del Mar Heights Rd. / I-5 SB on Ramp (Westbound)	AM	421	368	52.5	8.56	1,523
	PM	333	368	0	0	0
Del Mar Heights Rd. / I-5 SB on Ramp (Eastbound)	AM	360	499	0	0	0
	PM	204	499	0	0	0
Del Mar Heights Rd. / I-5 NB on Ramp	AM	N/A	Meter is not turned on			
	PM	561	593	0	0	0

NOTE:
Meter rate is based on the most restrictive meter rate provided by Caltrans
Delay = (Demand - Meter Rate) / Meter Rate * 60 minutes/hour
Queue = Excess Demand * 29 feet/vehicle

70 /40

TABLE X-X

Existing with Project Ramp Meter Analysis
(Phase 1 & 2)

Most Restrictive Meter Rate

Location		Demand (Veh/Hr)	Meter Rate (Veh/Hr)	Excess Demand (Veh/Hr)	Delay (Min)	Queue (Feet)
Del Mar Heights Rd. / I-5 SB on Ramp (Westbound)	AM	431	368	63	10.27	1,827
	PM	359	368	0	0	0
Del Mar Heights Rd. / I-5 SB on Ramp (Eastbound)	AM	360	499	0	0	0
	PM	204	499	0	0	0
Del Mar Heights Rd. / I-5 NB on Ramp	AM	N/A	Meter is not turned on			
	PM	574	593	0	0	0

NOTE:
Meter rate is based on the most restrictive meter rate provided by Caltrans
Delay = (Demand - Meter Rate) / Meter Rate * 60 minutes/hour
Queue = Excess Demand * 29 feet/vehicle

70 /40

TABLE X-X

Existing with Project Ramp Meter Analysis
(Buildout)

Most Restrictive Meter Rate

Location		Demand (Veh/Hr)	Meter Rate (Veh/Hr)	Excess Demand (Veh/Hr)	Delay (Min)	Queue (Feet)
Del Mar Heights Rd. / I-5 SB on Ramp (Westbound)	AM	450	368	82	13.37	2,378
	PM	398	368	29.5	5	856
Del Mar Heights Rd. / I-5 SB on Ramp (Eastbound)	AM	360	499	0	0	0
	PM	204	499	0	0	0
Del Mar Heights Rd. / I-5 NB on Ramp	AM	N/A	Meter is not turned on			
	PM	594	593	0.5	0	15

NOTE:
Meter rate is based on the most restrictive meter rate provided by Caltrans
Delay = (Demand - Meter Rate) / Meter Rate * 60 minutes/hour
Queue = Excess Demand * 29 feet/vehicle

70 vs. 40 Analysis

Near Term With & Without Project (Phase 1)
Street Segment Comparison

Road	Segment	Class.	Near Term			Near Term + Project (Phase 1)			ΔV/C	Is this impact Significant?
			LOS	Volume	V/C	LOS	Volume	V/C		
Del Mar Heights Rd.	Mango Drive to Portofino Drive	5-M	B	21,953	0.488	B	23,115	0.514	0.026	*NO*
	Portofino Drive to I-5 Southbound Ramps	5-PA	C	37,169	0.743	C	38,717	0.774	0.031	*NO*
	I-5 SB Ramps and I-5 NB Ramps	5-PA	D	41,293	0.826	D	44,003	0.880	0.054	*NO*
	I-5 Northbound Ramps to High Bluff Drive	PA	D	54,775	0.913	E	59,808	0.997	0.084	*YES*
	High Bluff Drive to Third Avenue	PA	C	40,648	0.677	C	46,456	0.774	0.097	*NO*
	Third Avenue to First Avenue	PA	C	40,648	0.677	C	45,166	0.753	0.075	*NO*
	First Avenue to El Camino Real	PA	C	40,648	0.677	C	43,875	0.731	0.054	*NO*
	El Camino Real to Carmel Country Road	PA	B	33,654	0.561	C	37,139	0.619	0.058	*NO*
	Carmel Country Road to Torrey Ridge Road	PA	A	22,308	0.372	A	23,986	0.400	0.028	*NO*
	Torrey Ridge Road to Lansdale Drive	PA	A	19,643	0.327	A	20,805	0.347	0.019	*NO*
	Lansdale Drive to Carmel Canyon Road	PA	A	15,644	0.261	A	16,289	0.271	0.011	*NO*
El Camino Real	Via de la Valle to San Dieguito Road	2-Ca	F	16,235	1.082	F	16,623	1.108	0.026	*YES*
	San Dieguito Road to Derby Downs Road	4-M	A	14,332	0.358	A	14,849	0.371	0.013	*NO*
	Derby Downs Road to Half Mile Drive	4-M	B	15,793	0.395	B	16,309	0.408	0.013	*NO*
	Half Mile Drive to Quarter Mile Drive	4-M	A	13,921	0.348	A	14,567	0.364	0.016	*NO*
	Quarter Mile Drive to Del Mar Heights Road	4-M	B	15,373	0.384	B	16,147	0.404	0.019	*NO*
	Del Mar Heights Road to Townsgate Drive	6-M	A	17,014	0.340	A	18,950	0.379	0.039	*NO*
	Townsgate Drive to High Bluff Drive	6-M	A	16,662	0.333	A	18,340	0.367	0.034	*NO*
	High Bluff Drive to Valley Centre Drive	6-M	B	21,035	0.421	B	22,197	0.444	0.023	*NO*
	Valley Centre Drive to Carmel Valley Road	5-M	C	30,131	0.670	C	30,905	0.687	0.017	*NO*
Carmel Country Road	Del Mar Heights Road to Townsgate Drive	4-M	B	16,410	0.410	B	17,701	0.443	0.032	*NO*
	Townsgate Drive to Carmel Creek Road	4-M	A	14,294	0.357	B	15,327	0.383	0.026	*NO*
	Carmel Creek Road to Carmel Canyon Road	4-M	A	13,531	0.338	A	14,176	0.354	0.016	*NO*
	Carmel Canyon Road to SR-56 WB Ramps	4-M	C	21,170	0.529	C	21,686	0.542	0.013	*NO*
Carmel Canyon Road	Del Mar Heights Road to Carmel Country Rd.	4-M	A	12,591	0.315	A	12,849	0.321	0.006	*NO*
Carmel Creek Road	Carmel Country Road to Carmel Grove Road	4-M	A	11,542	0.289	A	11,929	0.298	0.010	*NO*
	Carmel Grove Road to SR-56 WB Ramps	4-M	B	15,933	0.398	B	16,320	0.408	0.010	*NO*
Valley Centre Drive	Carmel View Road to Carmel Creek Road	4-C	B	11,826	0.394	B	11,955	0.399	0.004	*NO*
Carmel Valley Road	I-5 Northbound Ramps to El Camino Real	PA	C	45,968	0.766	C	46,226	0.770	0.004	*NO*
High Bluff Drive	Del Mar Heights Road to El Camino Real	2-Ca	D	10,137	0.676	D	10,524	0.702	0.026	*NO*
Via de la Valle	San Andres Drive to El Camino Real (W)	2-Cb	F	26,732	2.673	F	26,990	2.699	0.026	*YES*

Legend:

LOS= Level of Service

V/C= Volume to Capacity Ratio

ΔV/C= Change in V/C ratio

Cumulative Rates are used on segments not fronting the proposed project.

70 vs. 40 Analysis

Near Term With & Without Project (Phase 1 & 2)
Street Segment Comparison

Road	Segment	Class.	Near Term			Near Term + Project (Project Phase 1 & 2)			ΔV/C	Is this impact Significant?
			LOS	Volume	V/C	LOS	Volume	V/C		
Del Mar Heights Rd.	Mango Drive to Portofino Drive	5-M	B	21,953	0.488	B	23,612	0.525	0.037	*NO*
	Portofino Drive to I-5 Southbound Ramps	5-PA	C	37,169	0.743	C	39,380	0.788	0.044	*NO*
	I-5 SB Ramps and I-5 NB Ramps	5-PA	D	41,293	0.826	D	45,163	0.903	0.077	*NO*
	I-5 Northbound Ramps to High Bluff Drive	PA	D	54,775	0.913	F	61,963	1.033	0.120	*YES*
	High Bluff Drive to Third Avenue	PA	C	40,648	0.677	C	48,942	0.816	0.138	*NO*
	Third Avenue to First Avenue	PA	C	40,648	0.677	C	45,993	0.767	0.089	*NO*
	First Avenue to El Camino Real	PA	C	40,648	0.677	C	45,993	0.767	0.089	*NO*
	El Camino Real to Carmel Country Road	PA	B	33,654	0.561	C	38,631	0.644	0.083	*NO*
	Carmel Country Road to Torrey Ridge Road	PA	A	22,308	0.372	A	24,704	0.412	0.040	*NO*
	Torrey Ridge Road to Lansdale Drive	PA	A	19,643	0.327	A	21,302	0.355	0.028	*NO*
	Lansdale Drive to Carmel Canyon Road	PA	A	15,644	0.261	A	16,565	0.276	0.015	*NO*
El Camino Real	Via de la Valle to San Dieguito Road	2-Ca	F	16,235	1.082	F	16,788	1.119	0.037	*YES*
	San Dieguito Road to Derby Downs Road	4-M	A	14,332	0.358	B	15,070	0.377	0.018	*NO*
	Derby Downs Road to Half Mile Drive	4-M	B	15,793	0.395	B	16,530	0.413	0.018	*NO*
	Half Mile Drive to Quarter Mile Drive	4-M	A	13,921	0.348	A	14,843	0.371	0.023	*NO*
	Quarter Mile Drive to Del Mar Heights Road	4-M	B	15,373	0.384	B	16,479	0.412	0.028	*NO*
	Del Mar Heights Road to Townsgate Drive	6-M	A	17,014	0.340	A	19,779	0.396	0.055	*NO*
	Townsgate Drive to High Bluff Drive	6-M	A	16,662	0.333	A	19,058	0.381	0.048	*NO*
	High Bluff Drive to Valley Centre Drive	6-M	B	21,035	0.421	B	22,694	0.454	0.033	*NO*
	Valley Centre Drive to Carmel Valley Road	5-M	C	30,131	0.670	C	31,237	0.694	0.025	*NO*
Carmel Country Road	Del Mar Heights Road to Townsgate Drive	4-M	B	16,410	0.410	B	18,253	0.456	0.046	*NO*
	Townsgate Drive to Carmel Creek Road	4-M	A	14,294	0.357	B	15,769	0.394	0.037	*NO*
	Carmel Creek Road to Carmel Canyon Road	4-M	A	13,531	0.338	A	14,453	0.361	0.023	*NO*
	Carmel Canyon Road to SR-56 WB Ramps	4-M	C	21,170	0.529	C	21,907	0.548	0.018	*NO*
Carmel Canyon Road	Del Mar Heights Road to Carmel Country Rd.	4-M	A	12,591	0.315	A	12,959	0.324	0.009	*NO*
Carmel Creek Road	Carmel Country Road to Carmel Grove Road	4-M	A	11,542	0.289	A	12,095	0.302	0.014	*NO*
	Carmel Grove Road to SR-56 WB Ramps	4-M	B	15,933	0.398	B	16,486	0.412	0.014	*NO*
Valley Centre Drive	Carmel View Road to Carmel Creek Road	4-C	B	11,826	0.394	B	12,011	0.400	0.006	*NO*
Carmel Valley Road	I-5 Northbound Ramps to El Camino Real	PA	C	45,968	0.766	C	46,337	0.772	0.006	*NO*
High Bluff Drive	Del Mar Heights Road to El Camino Real	2-Ca	D	10,137	0.676	D	10,690	0.713	0.037	*NO*
Via de la Valle	San Andres Drive to El Camino Real (W)	2-Cb	F	26,732	2.673	F	27,101	2.710	0.037	*YES*

Legend:

LOS= Level of Service

V/C= Volume to Capacity Ratio

ΔV/C= Change in V/C ratio

Cumulative Rates are used on segments not fronting the proposed project.

70 vs. 40 Analysis

Near Term With & Without Project (Buildout)
Street Segment Comparison

Road	Segment	Class.	Near Term			Near Term + Project (Buildout)			ΔV/C	Is this impact Significant?
			LOS	Volume	V/C	LOS	Volume	V/C		
Del Mar Heights Rd.	Mango Drive to Portofino Drive	5-M	B	21,953	0.488	B	24,436	0.543	0.055	*NO*
	Portofino Drive to I-5 Southbound Ramps	5-PA	C	37,169	0.743	C	40,478	0.810	0.066	*NO*
	I-5 SB Ramps and I-5 NB Ramps	5-PA	D	41,293	0.826	E	47,085	0.942	0.116	*YES*
	I-5 Northbound Ramps to High Bluff Drive	PA	D	54,775	0.913	F	65,531	1.092	0.179	*YES*
	High Bluff Drive to Third Avenue	PA	C	40,648	0.677	D	53,059	0.884	0.207	*NO*
	Third Avenue to First Avenue	PA	C	40,648	0.677	C	48,647	0.811	0.133	*NO*
	First Avenue to El Camino Real	PA	C	40,648	0.677	C	48,647	0.811	0.133	*NO*
	El Camino Real to Carmel Country Road	PA	B	33,654	0.561	C	41,101	0.685	0.124	*NO*
	Carmel Country Road to Torrey Ridge Road	PA	A	22,308	0.372	B	25,893	0.432	0.060	*NO*
	Torrey Ridge Road to Lansdale Drive	PA	A	19,643	0.327	A	22,125	0.369	0.041	*NO*
	Lansdale Drive to Carmel Canyon Road	PA	A	15,644	0.261	A	17,023	0.284	0.023	*NO*
El Camino Real	Via de la Valle to San Dieguito Road	2-Ca	F	16,235	1.082	F	17,063	1.138	0.055	*YES*
	San Dieguito Road to Derby Downs Road	4-M	A	14,332	0.358	B	15,436	0.386	0.028	*NO*
	Derby Downs Road to Half Mile Drive	4-M	B	15,793	0.395	B	16,896	0.422	0.028	*NO*
	Half Mile Drive to Quarter Mile Drive	4-M	A	13,921	0.348	B	15,300	0.383	0.034	*NO*
	Quarter Mile Drive to Del Mar Heights Road	4-M	B	15,373	0.384	B	17,028	0.426	0.041	*NO*
	Del Mar Heights Road to Townsgate Drive	6-M	A	17,014	0.340	B	22,530	0.451	0.110	*NO*
	Townsgate Drive to High Bluff Drive	6-M	A	16,662	0.333	B	20,247	0.405	0.072	*NO*
	High Bluff Drive to Valley Centre Drive	6-M	B	21,035	0.421	B	23,517	0.470	0.050	*NO*
	Valley Centre Drive to Carmel Valley Road	5-M	C	30,131	0.670	C	31,785	0.706	0.037	*NO*
Carmel Country Road	Del Mar Heights Road to Townsgate Drive	4-M	B	16,410	0.410	B	19,168	0.479	0.069	*NO*
	Townsgate Drive to Carmel Creek Road	4-M	A	14,294	0.357	B	16,501	0.413	0.055	*NO*
	Carmel Creek Road to Carmel Canyon Road	4-M	A	13,531	0.338	A	14,910	0.373	0.034	*NO*
	Carmel Canyon Road to SR-56 WB Ramps	4-M	C	21,170	0.529	C	22,273	0.557	0.028	*NO*
Carmel Canyon Road	Del Mar Heights Road to Carmel Country Rd.	4-M	A	12,591	0.315	A	13,142	0.329	0.014	*NO*
Carmel Creek Road	Carmel Country Road to Carmel Grove Road	4-M	A	11,542	0.289	A	12,370	0.309	0.021	*NO*
	Carmel Grove Road to SR-56 WB Ramps	4-M	B	15,933	0.398	B	16,760	0.419	0.021	*NO*
Valley Centre Drive	Carmel View Road to Carmel Creek Road	4-C	B	11,826	0.394	B	12,102	0.403	0.009	*NO*
Carmel Valley Road	I-5 Northbound Ramps to El Camino Real	PA	C	45,968	0.766	C	46,520	0.775	0.009	*NO*
High Bluff Drive	Del Mar Heights Road to El Camino Real	2-Ca	D	10,137	0.676	D	10,965	0.731	0.055	*NO*
Via de la Valle	San Andres Drive to El Camino Real (W)	2-Cb	F	26,732	2.673	F	27,284	2.728	0.055	*YES*

Legend:

LOS= Level of Service

V/C= Volume to Capacity Ratio

ΔV/C= Change in V/C ratio

70 vs. 40 Analysis
Near Term With & Without Project (Phase 1) Intersection Summary

#	Intersection	Near Term				Near Term + Project (Phase 1)							
		AM Peak Hour		PM Peak Hour		AM Peak Hour		Δ	S?	PM Peak Hour		Δ	S?
		D	LOS	D	LOS	D	LOS			D	LOS		
1	El Camino Real / Via de la Valle	31.4	C	33.2	C	31.9	C	0.5	N	35.5	D	2.3	N
2	El Camino Real / San Dieguito Road	16.9	B	25.2	C	17.2	B	0.3	N	27.5	C	2.3	N
3	El Camino Real / Derby Downs Road	4.3	A	4.5	A	4.3	A	0.0	N	5.0	A	0.5	N
4	El Camino Real / Half Mile Drive	20.6	B	14.0	B	21.7	C	1.1	N	14.0	B	0.0	N
5	El Camino Real / Quarter Mile Drive	20.6	C	15.1	B	20.6	C	0.0	N	15.6	B	0.5	N
6	Del Mar Heights Road / Mango Drive	33.3	C	31.4	C	34.6	C	1.3	N	34.5	D	3.1	N
7	Del Mar Heights Road / Portofino Drive	9.4	A	9.2	A	9.6	A	0.2	N	9.3	A	0.1	N
8	Del Mar Heights Road / I-5 SB Ramps	12.6	B	14.1	B	13.5	B	0.9	N	16.4	B	2.3	N
9	Del Mar Heights Road / I-5 NB Ramps	34.3	C	30.9	C	45.4	D	11.1	N	41.8	D	10.9	N
10	Del Mar Heights Road / High Bluff Drive	28.5	C	32.1	C	29.4	C	0.9	N	43	D	10.9	N
11	Del Mar Heights Road / Third Avenue	DNE	DNE	DNE	DNE	6.2	A	0.0	N	11.4	B	0.0	N
12	Del Mar Heights Road / First Avenue	DNE	DNE	DNE	DNE	4.3	A	0.0	N	11.8	B	0.0	N
13	Del Mar Heights Road / El Camino Real	29.9	C	29.5	C	32.5	C	2.6	N	40.8	D	11.3	N
14	Del Mar Heights Road / Carmel Country Rd	22.9	C	21.1	C	26	C	3.1	N	24.2	C	3.1	N
15	Del Mar Heights Road / Torrey Ridge Drive	23.6	C	11.9	B	24.9	C	1.3	N	17.3	B	5.4	N
16	Del Mar Heights Road / Lansdale Drive	19	B	17.6	B	20.5	C	1.5	N	18.4	B	0.8	N
17	Del Mar Heights Road / Carmel Canyon Rd	13.8	B	10.2	B	13.9	B	0.1	N	10.3	B	0.1	N
18	El Camino Real / Del Mar Highlands Town Ctr.	6.8	A	13.5	B	14.1	B	7.3	N	23	C	9.5	N
19	Carmel Country Road / Townsgate Drive	26.5	C	21.8	C	27.2	C	0.7	N	27.2	C	5.4	N
20	El Camino Real / Townsgate Drive	21.3	C	20.7	C	21.3	C	0.0	N	20.9	C	0.2	N
21	Carmel Country Road / Carmel Creek Rd	48.4	D	24.1	C	51.6	D	3.2	N	26.4	C	2.3	N
22	El Camino Real / High Bluff Drive	21.1	C	26.2	C	23.3	C	2.2	N	28.0	C	1.8	N
23	Carmel View Road / High Bluff Drive	8.4	A	9.1	A	8.6	A	0.2	N	9.5	A	0.4	N
24	Carmel Creek Road / Carmel Grove Rd	27.8	C	17.5	B	27.8	C	0.0	N	17.7	B	0.2	N
25	Carmel Valley Road / I-5 SB Ramps	22.6	C	32.1	C	23.1	C	0.5	N	32.3	C	0.2	N
26	Carmel Valley Road / I-5 NB Ramps	13.6	B	20.4	C	13.7	B	0.1	N	20.6	C	0.2	N
27	El Camino Real / Valley Centre Drive	24.6	C	23.2	C	25	C	0.4	N	30	C	6.8	N
28	El Camino Real / Carmel Valley Rd	14.8	B	19.2	B	16.4	B	1.6	N	19.6	B	0.4	N
29	El Camino Real / SR-56 EB On Ramp	18	B	32.3	C	18.2	B	0.2	N	34.3	C	2.0	N
30	Carmel View Road / Valley Centre Drive	7.4	A	8.3	A	7.4	A	0.0	N	8.3	A	0.0	N
31	Carmel Creek Road / SR-56 WB Ramp	45.7	D	27	C	46.3	D	0.6	N	27.1	C	0.1	N
32	Carmel Creek Road / SR-56 EB Ramps	12.5	B	27.4	C	12.6	B	0.1	N	27.5	C	0.1	N
33	Carmel Country Road / Carmel Canyon Rd	33.1	C	25.6	C	35.8	D	2.7	N	26.1	C	0.5	N
34	Carmel Country Road / SR-56 WB Ramps	16.2	B	10.9	B	16.3	B	0.1	N	11.6	B	0.7	N
35	Carmel Country Road / SR-56 EB Ramps	14.1	B	11.7	B	14.1	B	0.0	N	12	B	0.3	N
36	Carmel Creek Road / Del Mar Trail	47.9	E	21.7	C	51.2	F	3.3	Y	22.9	C	1.2	N

Notes:

LOS = Level of Service

Δ = Change

S = Significant

D= Delay

DNE = Does not Exist

For Intersection #36, the worst approach delay and level of service was reported.

70 vs. 40 Analysis
Near Term With & Without Project (Phase 1 & 2) Intersection Summary

#	Intersection	Near Term				Near Term + Project (Phase 1 & 2)							
		AM Peak Hour		PM Peak Hour		AM Peak Hour		Δ	S ?	PM Peak Hour		Δ	S ?
		D	LOS	D	LOS	D	LOS			D	LOS		
1	El Camino Real / Via de la Valle	31.4	C	33.2	C	32.2	C	0.8	N	36	D	2.8	N
2	El Camino Real / San Dieguito Road	16.9	B	25.2	C	17.3	B	0.4	N	26.9	C	1.7	N
3	El Camino Real / Derby Downs Road	4.3	A	4.5	A	4.3	A	0.0	N	5.0	A	0.5	N
4	El Camino Real / Half Mile Drive	20.6	B	14.0	B	21.8	C	1.2	N	14.2	B	0.2	N
5	El Camino Real / Quarter Mile Drive	20.6	C	15.1	B	20.6	C	0.0	N	16.4	B	1.3	N
6	Del Mar Heights Road / Mango Drive	33.3	C	31.4	C	35.1	D	1.8	N	35.7	D	4.3	N
7	Del Mar Heights Road / Portofino Drive	9.4	A	9.2	A	9.6	A	0.2	N	9.4	A	0.2	N
8	Del Mar Heights Road / I-5 SB Ramps	12.6	B	14.1	B	13.8	B	1.2	N	17.4	B	3.3	N
9	Del Mar Heights Road / I-5 NB Ramps	34.3	C	30.9	C	49.3	D	15.0	N	53.3	D	22.4	N
10	Del Mar Heights Road / High Bluff Drive	28.5	C	32.1	C	30.5	C	2.0	N	56.9	E	24.8	Y
11	Del Mar Heights Road / Third Avenue	DNE	DNE	DNE	DNE	6.5	A	0.0	N	13.8	B	0.0	N
12	Del Mar Heights Road / First Avenue	DNE	DNE	DNE	DNE	6.1	A	0.0	N	15.8	B	0.0	N
13	Del Mar Heights Road / El Camino Real	29.9	C	29.5	C	34.6	C	4.7	N	60	E	30.5	Y
14	Del Mar Heights Road / Carmel Country Rd	22.9	C	21.1	C	26.4	C	3.5	N	25.7	C	4.6	N
15	Del Mar Heights Road / Torrey Ridge Drive	23.6	C	11.9	B	26.1	C	2.5	N	17.2	B	5.3	N
16	Del Mar Heights Road / Lansdale Drive	19.0	B	17.6	B	20.4	C	1.4	N	18.4	B	0.8	N
17	Del Mar Heights Road / Carmel Canyon Rd	13.8	B	10.2	B	14.0	B	0.2	N	10.2	B	0.0	N
18	El Camino Real / Del Mar Highlands Town Ctr.	6.8	A	13.5	B	14.3	B	7.5	N	27.7	C	14.2	N
19	Carmel Country Road / Townsgate Drive	26.5	C	21.8	C	27.4	C	0.9	N	22.6	C	0.8	N
20	El Camino Real / Townsgate Drive	21.3	C	20.7	C	21.4	C	0.1	N	21.7	C	1.0	N
21	Carmel Country Road / Carmel Creek Rd	48.4	D	24.1	C	52.3	D	3.9	N	27.4	C	3.3	N
22	El Camino Real / High Bluff Drive	21.1	C	26.2	C	21.6	C	0.5	N	28.9	C	2.7	N
23	Carmel View Road / High Bluff Drive	8.4	A	9.1	A	8.7	A	0.3	N	9.7	A	0.6	N
24	Carmel Creek Road / Carmel Grove Rd	27.8	C	17.5	B	27.8	C	0.0	N	17.7	B	0.2	N
25	Carmel Valley Road / I-5 SB Ramps	22.6	C	32.1	C	22.8	C	0.2	N	32.6	C	0.5	N
26	Carmel Valley Road / I-5 NB Ramps	13.6	B	20.4	C	14.1	B	0.5	N	20.7	C	0.3	N
27	El Camino Real / Valley Centre Drive	24.6	C	23.2	C	32.7	C	8.1	N	29.8	C	6.6	N
28	El Camino Real / Carmel Valley Rd	14.8	B	19.2	B	15	B	0.2	N	19.8	B	0.6	N
29	El Camino Real / SR-56 EB On Ramp	18.0	B	32.3	C	18.6	B	0.6	N	35.1	D	2.8	N
30	Carmel View Road / Valley Centre Drive	7.4	A	8.3	A	7.4	A	0.0	N	8.3	A	0.0	N
31	Carmel Creek Road / SR-56 WB Ramp	45.7	D	27	C	46.6	D	0.9	N	30.6	C	3.6	N
32	Carmel Creek Road / SR-56 EB Ramps	12.5	B	27.4	C	12.6	B	0.1	N	27.6	C	0.2	N
33	Carmel Country Road / Carmel Canyon Rd	33.1	C	25.6	C	35.9	D	2.8	N	25.8	C	0.2	N
34	Carmel Country Road / SR-56 WB Ramps	16.2	B	10.9	B	16.2	B	0.0	N	12.3	B	1.4	N
35	Carmel Country Road / SR-56 EB Ramps	14.1	B	11.7	B	14.3	B	0.2	N	12.1	B	0.4	N
36	Carmel Creek Road / Del Mar Trail	47.9	E	21.7	C	52.1	F	4.2	Y	23.8	C	2.1	N

Notes:

LOS = Level of Service

Δ = Change

S = Significant

D= Delay

DNE = Does not Exist

For Intersection #36, the worst approach delay and level of service is reported.

TABLE X-X

Near Term With & Without Project (Buildout) Intersection Summary
70/40 Analysis

#	Intersection	Near Term				Near Term + Project (Buildout)							
		AM Peak Hour		PM Peak Hour		AM Peak Hour		Δ	S ?	PM Peak Hour		Δ	S ?
		D	LOS	D	LOS	D	LOS			D	LOS		
1	El Camino Real / Via de la Valle	31.4	C	33.2	C	32.5	C	1.1	N	37.0	D	3.8	N
2	El Camino Real / San Dieguito Road	16.9	B	25.2	C	17.4	B	0.5	N	27.6	C	2.4	N
3	El Camino Real / Derby Downs Road	4.3	A	4.5	A	4.3	A	0.0	N	5.0	A	0.5	N
4	El Camino Real / Half Mile Drive	20.6	B	14.0	B	22.5	C	1.9	N	14.4	B	0.4	N
5	El Camino Real / Quarter Mile Drive	20.6	C	15.1	B	20.6	C	0.0	N	15.2	B	0.1	N
6	Del Mar Heights Road / Mango Drive	33.3	C	31.4	C	35.6	D	2.3	N	37.0	D	5.6	N
7	Del Mar Heights Road / Portofino Drive	9.4	A	9.2	A	9.7	A	0.3	N	9.5	A	0.3	N
8	Del Mar Heights Road / I-5 SB Ramps	12.6	B	14.1	B	27.7	C	15.1	N	29.4	C	15.3	N
9	Del Mar Heights Road / I-5 NB Ramps	34.3	C	30.9	C	45.3	D	11.0	N	66.3	E	35.4	Y
10	Del Mar Heights Road / High Bluff Drive	28.5	C	32.1	C	32.5	C	4.0	N	55.4	E	23.3	Y
11	Del Mar Heights Road / Third Avenue	DNE	DNE	DNE	DNE	8.6	A	N/A	N	23.6	C	N/A	N
12	Del Mar Heights Road / First Avenue	DNE	DNE	DNE	DNE	8.0	A	N/A	N	22.4	C	N/A	N
13	Del Mar Heights Road / El Camino Real	29.9	C	29.5	C	37.3	D	7.4	N	63.5	E	34.0	Y
14	Del Mar Heights Road / Carmel Country Rd	22.9	C	21.1	C	27.3	C	4.4	N	28.9	C	7.8	N
15	Del Mar Heights Road / Torrey Ridge Drive	23.6	C	11.9	B	26.5	C	2.9	N	11.9	B	0.0	N
16	Del Mar Heights Road / Lansdale Drive	19.0	B	17.6	B	20.9	C	1.9	N	19.7	B	2.1	N
17	Del Mar Heights Road / Carmel Canyon Rd	13.8	B	10.2	B	14.0	B	0.2	N	10.7	B	0.5	N
18	El Camino Real / Del Mar Highlands Town Ctr.	6.8	A	13.5	B	15.9	B	9.1	N	30.8	C	17.3	N
19	Carmel Country Road / Townsgate Drive	26.5	C	21.8	C	27.7	C	1.2	N	23.2	C	1.4	N
20	El Camino Real / Townsgate Drive	21.3	C	20.7	C	21.7	C	0.4	N	23.8	C	3.1	N
21	Carmel Country Road / Carmel Creek Rd	48.4	D	24.1	C	53.5	D	5.1	N	28.7	C	4.6	N
22	El Camino Real / High Bluff Drive	21.1	C	26.2	C	22.3	C	1.2	N	30.1	C	3.9	N
23	Carmel View Road / High Bluff Drive	8.4	A	9.1	A	8.8	A	0.4	N	10.0	A	0.9	N
24	Carmel Creek Road / Carmel Grove Rd	27.8	C	17.5	B	27.8	C	0.0	N	18.0	B	0.5	N
25	Carmel Valley Road / I-5 SB Ramps	22.6	C	32.1	C	23.0	C	0.4	N	33.1	C	1.0	N
26	Carmel Valley Road / I-5 NB Ramps	13.6	B	20.4	C	14.1	B	0.5	N	20.8	C	0.4	N
27	El Camino Real / Valley Centre Drive	24.6	C	23.2	C	32.9	C	8.3	N	30.5	C	7.3	N
28	El Camino Real / Carmel Valley Rd	14.8	B	19.2	B	15.1	B	0.3	N	20.0	B	0.8	N
29	El Camino Real / SR-56 EB On Ramp	18.0	B	32.3	C	18.8	B	0.8	N	36.3	D	4.0	N
30	Carmel View Road / Valley Centre Drive	7.4	A	8.3	A	7.4	A	0.0	N	8.3	A	0.0	N
31	Carmel Creek Road / SR-56 WB Ramp	45.7	D	27.0	C	46.8	D	1.1	N	30.9	C	3.9	N
32	Carmel Creek Road / SR-56 EB Ramps	12.5	B	27.4	C	12.6	B	0.1	N	27.8	C	0.4	N
33	Carmel Country Road / Carmel Canyon Rd	33.1	C	25.6	C	35.4	D	2.3	N	26.6	C	1.0	N
34	Carmel Country Road / SR-56 WB Ramps	16.2	B	10.9	B	16.2	B	0.0	N	12.4	B	1.5	N
35	Carmel Country Road / SR-56 EB Ramps	14.1	B	11.7	B	14.3	B	0.2	N	12.3	B	0.6	N
36	Carmel Creek Road / Del Mar Trail	47.9	E	21.7	C	53.1	E	5.2	Y	22.6	C	0.9	N

Notes:

LOS = Level of Service

Δ = Change

S = Significant

D= Delay

DNE = Does not Exist

70 vs. 40 Analysis
Near Term With Project (Phase 1) and (Phase 1 &2)
Freeway Level of Service Summary

Segment	Dir.	Near Term		Near Term + Project (Phase 1)		Δ	Sig.?	Near Term		Near Term + Project (Phase 1 & 2)		Δ	Sig.?
		V/C	LOS	V/C	LOS			V/C	LOS	V/C	LOS		
I-5													
Lomas Santa Fe Drive / Via De La Valle	NB	0.6354	C	0.6380	C	0.0026	NO	0.6354	C	0.6391	C	0.0037	NO
Lomas Santa Fe Drive / Via De La Valle	SB	0.6558	C	0.6584	C	0.0027	NO	0.6558	C	0.6596	C	0.0038	NO
Via De La Valle/Del Mar Heights Rd.	NB	0.6481	C	0.6512	C	0.0031	NO	0.6481	C	0.6526	C	0.0045	NO
Via De La Valle/Del Mar Heights Rd.	SB	0.6688	C	0.6721	C	0.0032	NO	0.6688	C	0.6735	C	0.0046	NO
Del Mar Heights Rd./ SR-56	NB	0.5596	B	0.5649	B	0.0054	NO	0.5596	B	0.5672	B	0.0077	NO
Del Mar Heights Rd./ SR-56	SB	0.5774	B	0.5830	B	0.0055	NO	0.5774	B	0.5854	B	0.0079	NO
SR-56/ Carmel Mountain Road	NB	0.5778	B	0.5804	B	0.0026	NO	0.5778	B	0.5815	B	0.0037	NO
SR-56/ Carmel Mountain Road	SB	0.6325	C	0.6354	C	0.0028	NO	0.6325	C	0.6366	C	0.0040	NO
Carmel Mountain Road/ I-805 Merge	NB	0.5613	B	0.5633	B	0.0020	NO	0.5613	B	0.5642	B	0.0029	NO
Carmel Mountain Road/ I-805 Merge	SB	0.5512	B	0.5532	B	0.0020	NO	0.5512	B	0.5541	B	0.0028	NO
SR-56													
El Camino Real / Carmel Creek Rd.	EB	0.8291	D	0.8317	D	0.0025	NO	0.8291	D	0.8328	D	0.0036	NO
El Camino Real / Carmel Creek Rd.	WB	0.8503	D	0.8529	D	0.0026	NO	0.8503	D	0.8540	D	0.0037	NO
Carmel Creek Rd. / Carmel Country Rd.	EB	0.7723	C	0.7749	C	0.0025	NO	0.7723	C	0.7760	C	0.0036	NO
Carmel Creek Rd. / Carmel Country Rd.	WB	0.7920	D	0.7946	D	0.0026	NO	0.7920	D	0.7957	D	0.0037	NO

Legend:

Dir.= Direction
V/C= Volume to Capacity Ratio
LOS= Level of Service
Sig.?= Is this significant?

70 vs. 40 Analysis

Near Term With Project (Buildout)

Freeway Level of Service Summary

Segment	Dir.	Near Term		Near Term + Project (Buildout)		Δ	Sig.?
		V/C	LOS	V/C	LOS		
I-5							
Lomas Santa Fe Drive / Via De La Valle	NB	0.6354	C	0.6400	C	0.0046	NO
Lomas Santa Fe Drive / Via De La Valle	SB	0.6558	C	0.6605	C	0.0047	NO
Via De La Valle/Del Mar Heights Rd.	NB	0.6481	C	0.6537	C	0.0056	NO
Via De La Valle/Del Mar Heights Rd.	SB	0.6688	C	0.6746	C	0.0058	NO
Del Mar Heights Rd./ SR-56	NB	0.5596	B	0.5691	B	0.0095	NO
Del Mar Heights Rd./ SR-56	SB	0.5774	B	0.5873	B	0.0099	NO
SR-56/ Carmel Mountain Road	NB	0.5778	B	0.5824	B	0.0046	NO
SR-56/ Carmel Mountain Road	SB	0.6325	C	0.6375	C	0.0050	NO
Carmel Mountain Road/ I-805 Merge	NB	0.5613	B	0.5649	B	0.0036	NO
Carmel Mountain Road/ I-805 Merge	SB	0.5512	B	0.5547	B	0.0035	NO
SR-56							
El Camino Real / Carmel Creek Rd.	EB	0.8291	D	0.8337	D	0.0045	NO
El Camino Real / Carmel Creek Rd.	WB	0.8503	D	0.8549	D	0.0046	NO
Carmel Creek Rd. / Carmel Country Rd.	EB	0.7723	C	0.7768	C	0.0045	NO
Carmel Creek Rd. / Carmel Country Rd.	WB	0.7920	D	0.7966	D	0.0046	NO

Legend:

Dir.= Direction
V/C= Volume to Capacity Ratio
LOS= Level of Service
Sig.?= Is this significant?

70 vs. 40 Analysis

Near Term With & Without Project Ramp Meter Analysis

(Project Phase 1)

Most Restrictive Meter Rate

Location		Near Term		Near Term + Project (Phase 1)		∇	S
		Delay (Min)	Queue (Ft)	Delay (Min)	Queue (Ft)		
Del Mar Heights Rd. / I-5 SB on Ramp (Westbound Loop)	AM	9.29	1,653	11.66	2,074	2.36	NO
	PM	0.00	0	5.38	957	5.38	NO
Del Mar Heights Rd. / I-5 SB on Ramp (Eastbound)	AM	0.00	0	0.00	0	0.00	NO
	PM	0.00	0	0.00	0	0.00	NO
Del Mar Heights Rd. / I-5 NB on Ramp	AM	Meter is not turned on				0.00	NO
	PM	0.00	0	1.87	537	1.87	NO

Notes:

Δ = Change in Delay (minutes)

S = Significant, the allowable increase in delay at a ramp meter with more than 15 minutes delay and freeway LOS E is 2 min.

S = Significant, the allowable increase in delay at a ramp meter with more than 15 minutes delay and freeway LOS F is 1 min.

70 vs. 40 Analysis

Near Term With & Without Project Ramp Meter Analysis

(Project Phase 1 & 2)

Most Restrictive Meter Rate

Location		Near Term		Near Term + Project (Phase 1 & 2)		∇	S
		Delay (Min)	Queue (Ft)	Delay (Min)	Queue (Ft)		
Del Mar Heights Rd. / I-5 SB on Ramp (Westbound Loop)	AM	9.29	1,653	13.37	2,378	4.08	NO
	PM	0.00	0	9.70	1,726	9.70	NO
Del Mar Heights Rd. / I-5 SB on Ramp (Eastbound)	AM	0.00	0	0.00	0	0.00	NO
	PM	0.00	0	0.00	0	0.00	NO
Del Mar Heights Rd. / I-5 NB on Ramp	AM	Meter is not turned on				0.00	NO
	PM	0.00	0	3.19	914	3.19	NO

Notes:

Δ = Change in Delay (minutes)

S = Significant, the allowable increase in delay at a ramp meter with more than 15 minutes delay and freeway LOS E is 2 min.

S = Significant, the allowable increase in delay at a ramp meter with more than 15 minutes delay and freeway LOS F is 1 min.

70 vs. 40 Analysis

Near Term With & Without Project Ramp Meter Analysis

(Buildout)

Most Restrictive Meter Rate

Location		Near Term		Near Term + Project (Buildout)		∇	S
		Delay (Min)	Queue (Ft)	Delay (Min)	Queue (Ft)		
Del Mar Heights Rd. / I-5 SB on Ramp (Westbound Loop)	AM	9.29	1,653	16.47	2,929	7.17	NO
	PM	0.00	0	15.98	2,842	15.98	NO
Del Mar Heights Rd. / I-5 SB on Ramp (Eastbound)	AM	0.00	0	0.00	0	0.00	NO
	PM	0.00	0	0.00	0	0.00	NO
Del Mar Heights Rd. / I-5 NB on Ramp	AM	Meter is not turned on				0.00	NO
	PM	0.00	0	5.16	1,479	5.16	NO

Notes:

Δ = Change in Delay (minutes)

S = Significant, the allowable increase in delay at a ramp meter with more than 15 minutes delay and freeway LOS E is 2 min.

S = Significant, the allowable increase in delay at a ramp meter with more than 15 minutes delay and freeway LOS F is 1 min.

70 vs. 40 Analysis

Year 2030 Without & Year 2030 With Project (Buildout)
Street Segment Comparison

Road	Segment	Class.	Year 2030			Year 2030 + Project (Buildout)			ΔV/C	Is this impact Significant?
			LOS	Volume	V/C	LOS	Volume	V/C		
Del Mar Heights Rd.	Mango Drive to Portofino Drive	5-M	D	39,580	0.880	D	41,646	0.925	0.046	*NO*
	Portofino Drive to I-5 Southbound Ramps	5-PA	C	39,580	0.792	D	42,335	0.847	0.055	*NO*
	I-5 SB Ramps and I-5 NB Ramps	5-PA	C	37,820	0.756	D	42,642	0.853	0.096	*NO*
	I-5 Northbound Ramps to High Bluff Drive	PA	D	51,800	0.863	F	60,754	1.013	0.149	*YES*
	High Bluff Drive to Third Avenue	PA	C	42,770	0.713	E	55,181	0.920	0.207	*YES*
	Third Avenue to First Avenue	PA	C	42,770	0.713	D	50,768	0.846	0.133	*NO*
	First Avenue to El Camino Real	PA	C	42,770	0.713	D	50,768	0.846	0.133	*NO*
	El Camino Real to Carmel Country Road	PA	C	38,370	0.640	C	44,569	0.743	0.103	*NO*
	Carmel Country Road to Torrey Ridge Road	PA	B	34,400	0.573	C	37,385	0.623	0.050	*NO*
	Torrey Ridge Road to Lansdale Drive	PA	B	34,400	0.573	C	36,466	0.608	0.034	*NO*
	Lansdale Drive to Carmel Canyon Road	PA	B	34,400	0.573	C	35,548	0.592	0.019	*NO*
El Camino Real	Via de la Valle to San Dieguito Road	2-Ca	F	31,320	2.088	F	32,009	2.134	0.046	*YES*
	San Dieguito Road to Derby Downs Road	4-M	C	29,000	0.725	C	29,918	0.748	0.023	*NO*
	Derby Downs Road to Half Mile Drive	4-M	C	29,000	0.725	C	29,918	0.748	0.023	*NO*
	Half Mile Drive to Quarter Mile Drive	4-M	C	29,000	0.725	D	30,148	0.754	0.029	*NO*
	Quarter Mile Drive to Del Mar Heights Road	4-M	C	29,000	0.725	D	30,378	0.759	0.034	*NO*
	Del Mar Heights Road to Townsgate Drive	6-M	B	23,000	0.460	C	28,516	0.570	0.110	*NO*
	Townsgate Drive to High Bluff Drive	6-M	B	26,000	0.520	C	29,585	0.592	0.072	*NO*
	High Bluff Drive to Valley Centre Drive	6-M	C	35,620	0.712	C	37,686	0.754	0.041	*NO*
	Valley Centre Drive to Carmel Valley Road	5-M	D	36,470	0.810	D	37,848	0.841	0.031	*NO*
Carmel Country Road	Del Mar Heights Road to Townsgate Drive	4-M	C	22,280	0.557	C	24,576	0.614	0.057	*NO*
	Townsgate Drive to Carmel Creek Road	4-M	B	18,800	0.470	B	20,637	0.516	0.046	*NO*
	Carmel Creek Road to Carmel Canyon Road	4-M	A	13,590	0.340	A	14,738	0.368	0.029	*NO*
	Carmel Canyon Road to SR-56 WB Ramps	4-M	C	26,000	0.650	C	26,918	0.673	0.023	*NO*
Carmel Canyon Road	Del Mar Heights Road to Carmel Country Rd.	4-M	A	13,000	0.325	A	13,459	0.336	0.011	*NO*
Carmel Creek Road	Carmel Country Road to Carmel Grove Road	4-M	B	15,000	0.375	B	15,689	0.392	0.017	*NO*
	Carmel Grove Road to SR-56 WB Ramps	4-M	B	17,000	0.425	B	17,689	0.442	0.017	*NO*
Valley Centre Drive	Carmel View Road to Carmel Creek Road	4-C	D	20,000	0.667	D	20,230	0.674	0.008	*NO*
Carmel Valley Road	I-5 Northbound Ramps to El Camino Real	PA	C	43,020	0.717	C	43,479	0.725	0.008	*NO*
High Bluff Drive	Del Mar Heights Road to El Camino Real	2-Ca	D	11,700	0.780	D	12,389	0.826	0.046	*NO*
Via de la Valle	San Andres Drive to El Camino Real (W)	2-Cb	F	33,100	3.310	F	33,559	3.356	0.046	*YES*

Legend:

LOS= Level of Service

V/C= Volume to Capacity Ratio

ΔV/C= Change in V/C ratio

Cumulative Rates are used on segments not fronting the proposed project.

70 vs. 40 Analysis
Year 2030 With & Without Project (Buildout) Intersection Summary

#	Intersection	Year 2030				Year 2030 + Project (Buildout)							
		AM Peak Hour		PM Peak Hour		AM Peak Hour		Δ	S ?	PM Peak Hour		Δ	S ?
		D	LOS	D	LOS	D	LOS			D	LOS		
1	El Camino Real / Via de la Valle	22.2	C	19.1	B	23.1	C	0.9	No	20.5	C	1.4	No
2	El Camino Real / San Dieguito Road	24.2	C	47.2	D	26.7	C	2.5	No	52.6	D	5.4	No
3	El Camino Real / Derby Downs Road	4.3	A	5.1	A	4.3	A	0.0	No	5.1	A	0.0	No
4	El Camino Real / Half Mile Drive	22.9	C	14.0	B	24.8	C	1.9	No	14.2	B	0.2	No
5	El Camino Real / Quarter Mile Drive	20.6	C	12.1	B	25.2	C	4.6	No	12.8	B	0.7	No
6	Del Mar Heights Road / Mango Drive	36.8	D	29.3	C	40.8	D	4.0	No	38.5	D	9.2	No
7	Del Mar Heights Road / Portofino Drive	9.8	A	9.6	A	10.1	B	0.3	No	10.1	B	0.5	No
8	Del Mar Heights Road / I-5 SB Ramps	14.8	B	14.9	B	17.1	B	2.3	No	19.8	B	4.9	No
9	Del Mar Heights Road / I-5 NB Ramps	67.2	E	53.0	D	119.8	F	52.6	Yes	110.9	F	57.9	Yes
10	Del Mar Heights Road / High Bluff Drive	44.0	D	40.1	D	55.6	E	11.6	Yes	78.1	E	38.0	Yes
11	Del Mar Heights Road / Third Avenue	DNE	DNE	DNE	DNE	8.3	A	0.0	No	21.5	C	0.0	No
12	Del Mar Heights Road / First Avenue	DNE	DNE	DNE	DNE	7.7	A	0.0	No	18.2	B	0.0	No
13	Del Mar Heights Road / El Camino Real	35.0	C	41.5	D	51.1	D	16.1	No	85.4	F	43.9	Yes
14	Del Mar Heights Road / Carmel Country Rd	33.6	C	34.1	C	41.5	D	7.9	No	49.9	D	15.8	No
15	Del Mar Heights Road / Torrey Ridge Drive	29.5	C	11.9	B	33.2	C	3.7	No	14.5	B	2.6	No
16	Del Mar Heights Road / Lansdale Drive	32.7	C	18.7	B	41.5	D	8.8	No	20.9	C	2.2	No
17	Del Mar Heights Road / Carmel Canyon Rd	29.4	C	16.0	B	29.7	C	0.3	No	17.2	B	1.2	No
18	El Camino Real / Del Mar Highlands Town Ctr.	6.2	A	14.2	B	17.6	B	11.4	No	33.9	C	19.7	No
19	Carmel Country Road / Townsgate Drive	32.0	C	29.8	C	32.9	C	0.9	No	34.7	C	4.9	No
20	El Camino Real / Townsgate Drive	22.5	C	24.3	C	22.7	C	0.2	No	35.6	D	11.3	No
21	Carmel Country Road / Carmel Creek Rd	41.5	D	19.7	B	45.6	D	4.1	No	21.6	C	1.9	No
22	El Camino Real / High Bluff Drive	22.9	C	33.6	C	24.4	C	1.5	No	40.0	D	6.4	No
23	Carmel View Road / High Bluff Drive	8.9	A	9.8	A	9.3	A	0.4	No	10.9	B	1.1	No
24	Carmel Creek Road / Carmel Grove Rd	15.3	B	11.4	B	15.3	B	0.0	No	17.3	B	5.9	No
25	Carmel Valley Road / I-5 SB Ramps	25.3	C	30.9	C	26.3	C	1.0	No	35.3	D	4.4	No
26	Carmel Valley Road / I-5 NB Ramps	26.8	C	19.6	B	27.3	C	0.5	No	20.0	B	0.4	No
27	El Camino Real / Valley Centre Drive	22.0	C	27.4	C	22.2	C	0.2	No	29.4	C	2.0	No
28	El Camino Real / Carmel Valley Rd	22.0	C	17.6	B	22.2	C	0.2	No	19.1	B	1.5	No
29	El Camino Real / SR-56 EB On Ramp	23.1	C	89.0	F	23.6	C	0.5	No	97.7	F	8.7	Yes
30	Carmel View Road / Valley Centre Drive	7.7	A	6.2	A	7.7	A	0.0	No	6.2	A	0.0	No
31	Carmel Creek Road / SR-56 WB Ramp	47.0	D	42.6	D	54.2	D	7.2	No	53.3	D	10.7	No
32	Carmel Creek Road / SR-56 EB Ramps	15.0	B	22.9	C	15.0	B	0.0	No	23.4	C	0.5	No
33	Carmel Country Road / Carmel Canyon Rd	34.5	C	33.4	C	36.8	D	2.3	No	34.1	C	0.7	No
34	Carmel Country Road / SR-56 WB Ramps	17.1	B	9.9	A	17.1	B	0.0	No	12.7	B	2.8	No
35	Carmel Country Road / SR-56 EB Ramps	20.1	C	18.2	B	21.9	C	1.8	No	18.6	B	0.4	No
36	Carmel Creek Road / Del Mar Trail	43.3	E	20.6	C	48.5	E	5.2	Yes	23.6	C	3.0	No

Notes:

LOS = Level of Service

Δ = Change

S = Significant

D= Delay

DNE = Does not exist

70 vs. 40 Analysis

Year 2030 With & Without Project (Buildout)

Freeway Level of Service Summary

Segment	Dir.	Year 2030		Year 2030 + Project		Δ	Sig.?
		V/C	LOS	V/C	LOS		
I-5							
Lomas Santa Fe Drive / Via De La Valle	NB	0.7378	C	0.7424	C	0.0046	NO
Lomas Santa Fe Drive / Via De La Valle	SB	0.7616	C	0.7663	C	0.0047	NO
Via De La Valle/Del Mar Heights Rd..	NB	0.7781	C	0.7837	C	0.0056	NO
Via De La Valle/Del Mar Heights Rd.	SB	0.8032	D	0.8090	D	0.0058	NO
Del Mar Heights Rd./ SR-56	NB	0.6972	C	0.7068	C	0.0095	NO
Del Mar Heights Rd./ SR-56	SB	0.7197	C	0.7296	C	0.0099	NO
SR-56/ Carmel Mountain Road	NB	0.8180	D	0.8226	D	0.0046	NO
SR-56/ Carmel Mountain Road	SB	0.8955	D	0.9005	D	0.0050	NO
Carmel Mountain Road/ I-805 Merge	NB	0.7554	C	0.7590	C	0.0036	NO
Carmel Mountain Road/ I-805 Merge	SB	0.7419	C	0.7454	C	0.0035	NO
SR-56							
El Camino Real / Carmel Creek Rd.	EB	0.9847	E	0.9881	E	0.0034	NO
El Camino Real / Carmel Creek Rd.	WB	1.0098	F	1.0132	F	0.0035	NO
Carmel Creek Rd. / Carmel Country Rd.	EB	0.9027	D	0.9061	D	0.0034	NO
Carmel Creek Rd. / Carmel Country Rd.	WB	0.9257	E	0.9292	E	0.0035	NO

Legend:

Dir.= Direction
V/C= Volume to Capacity Ratio
LOS= Level of Service
Sig.?= Is this significant?

70 vs. 40 Analysis

Year 2030 With & Without Project Ramp Meter Analysis

Most Restrictive Meter Rate

Location		Year 2030		Year 2030 With Project (Buildout)		∇	S
		Delay (Min)	Queue (Ft)	Delay (Min)	Queue (Ft)		
Del Mar Heights Rd. / I-5 SB on Ramp (Westbound Loop)	AM	40.27	7,163	47.45	8,439	7.17	YES
	PM	5.22	928	30.65	5,452	25.43	YES
Del Mar Heights Rd. / I-5 SB on Ramp (Eastbound)	AM	0.00	0	0.00	0	0.00	NO
	PM	0.00	0	0.00	0	0.00	NO
Del Mar Heights Rd. / I-5 NB on Ramp	AM	Meter is not turned on				0.00	NO
	PM	8.30	2,378	16.19	4,640	7.89	YES
El Camino Real / SR-56 EB on Ramp	AM	0.00	0	0.00	0	0.00	NO
	PM	3.93	2,277	4.80	2,784	0.88	NO
Carmel Country Rd. / SR-56 EB on Ramp	AM	0.00	0	0.00	0	0.00	NO
	PM	0.00	0	0.00	0	0.00	NO

Notes:
Δ = Change in Delay (minutes)
S = Significant, if change in delay is greater than 2 minutes and delay is greater than 15 minutes

15 Minute Max. Meter Rate

Location		Year 2030		Year 2030 With Project (Buildout)		∇	S
		Delay (Min)	Queue (Ft)	Delay (Min)	Queue (Ft)		
Del Mar Heights Rd. / I-5 SB on Ramp (Westbound Loop)	AM	15.0	3,567	20.4	4,843	5.4	YES
	PM	15.0	2,320	44.3	6,844	29.3	YES
Del Mar Heights Rd. / I-5 SB on Ramp (Eastbound)	AM	15.0	2,291	15.0	2,291	0.0	NO
	PM	15.0	1,740	15.0	1,740	0.0	NO
Del Mar Heights Rd. / I-5 NB on Ramp	AM	Meter is not turned on				0.0	NO
	PM	15.0	3,915	23.7	6,177	8.7	YES
El Camino Real / SR-56 EB on Ramp	PM	15.0	4,060	15.0	4,089	0.0	NO
	PM	15.0	7,415	15.0	7,517	0.0	NO
Carmel Country Rd. / SR-56 EB on Ramp	PM	15.0	1,914	15.0	1,943	0.0	NO
	PM	15.0	1,711	15.0	1,813	0.0	NO

Notes:
Δ = Change in Delay (minutes)
S = Significant, the allowable increase in delay at a ramp meter with more than 15 minutes delay and freeway LOS E is 2 min.
S = Significant, the allowable increase in delay at a ramp meter with more than 15 minutes delay and freeway LOS F is 1 min.

APPENDIX B

One Paseo

70/40 Analysis

Synchro Worksheets

For Existing Synchro Worksheets, please refer to Appendix D

For Near Term Without Project Synchro Worksheets, please refer to Appendix G

For Year 2030 Without Project Synchro Worksheets, please refer to Appendix L

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	352	370	290	448	8	368	5	147	1	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.95	1.00		0.98	
Satd. Flow (prot)	1770	1863	1583	1770	1858			1775	1583		1750	
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.95	1.00		0.98	
Satd. Flow (perm)	1770	1863	1583	1770	1858			1775	1583		1750	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	2	391	411	322	498	9	409	6	163	1	1	1
RTOR Reduction (vph)	0	0	265	0	1	0	0	0	118	0	1	0
Lane Group Flow (vph)	2	391	146	322	506	0	0	415	45	0	2	0
Turn Type	Prot		Prot	Prot			Split		Prot	Split		
Protected Phases	7	4	4	3	8		2	2	2	6	6	
Permitted Phases												
Actuated Green, G (s)	0.8	22.4	22.4	16.2	37.8			21.5	21.5		1.1	
Effective Green, g (s)	0.8	22.4	22.4	16.2	37.8			21.5	21.5		1.1	
Actuated g/C Ratio	0.01	0.29	0.29	0.21	0.49			0.28	0.28		0.01	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	18	541	459	371	910			494	441		25	
v/s Ratio Prot	0.00	c0.21	0.09	c0.18	0.27			c0.23	0.03		c0.00	
v/s Ratio Perm												
v/c Ratio	0.11	0.72	0.32	0.87	0.56			0.84	0.10		0.08	
Uniform Delay, d1	37.8	24.6	21.4	29.5	13.8			26.2	20.7		37.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	2.7	4.7	0.4	18.8	0.7			12.2	0.1		1.4	
Delay (s)	40.6	29.4	21.8	48.3	14.6			38.4	20.8		38.9	
Level of Service	D	C	C	D	B			D	C		D	
Approach Delay (s)		25.5			27.7			33.4			38.9	
Approach LOS		C			C			C			D	

Intersection Summary				
HCM Average Control Delay	28.4	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.79			
Actuated Cycle Length (s)	77.2	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	71.9%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

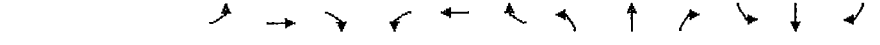
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Volume (vph)	394	299	0	194	279	281	429
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00		1.00	1.00	1.00	0.95
Frt	1.00	0.85		1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00		1.00	1.00	0.95	1.00
Satd. Flow (prot)	3433	1583		1863	1583	1770	3539
Flt Permitted	0.95	1.00		1.00	1.00	0.95	1.00
Satd. Flow (perm)	3433	1583		1863	1583	1770	3539
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	438	332	0	216	310	312	477
RTOR Reduction (vph)	0	248	0	0	237	0	0
Lane Group Flow (vph)	438	84	0	216	73	312	477
Turn Type		Perm	Prot		Perm	Prot	
Protected Phases	1		3	8		7	
Permitted Phases		1			8		6
Actuated Green, G (s)	12.8	12.8		11.9	11.9	14.0	12.8
Effective Green, g (s)	12.8	12.8		11.9	11.9	14.0	12.8
Actuated g/C Ratio	0.25	0.25		0.23	0.23	0.28	0.25
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	867	400		437	372	489	893
v/s Ratio Prot	0.13			c0.12		c0.18	
v/s Ratio Perm		0.05			0.05		c0.13
v/c Ratio	0.51	0.21		0.49	0.20	0.64	0.53
Uniform Delay, d1	16.2	15.0		16.8	15.6	16.1	16.4
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5	0.3		0.9	0.3	2.7	0.6
Delay (s)	16.7	15.2		17.7	15.8	18.9	17.0
Level of Service	B	B		B	B	B	B
Approach Delay (s)	16.1			16.6			17.7
Approach LOS	B			B			B

Intersection Summary				
HCM Average Control Delay	16.8	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.56			
Actuated Cycle Length (s)	50.7	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	47.0%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Volume (vph)	84	7	0	449	50	3	832
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0		4.0	4.0
Lane Util. Factor	0.97			0.95		1.00	0.95
Frt	0.99			0.98		1.00	1.00
Flt Protected	0.96			1.00		0.95	1.00
Satd. Flow (prot)	3414			3486		1770	3539
Flt Permitted	0.96			1.00		0.95	1.00
Satd. Flow (perm)	3414			3486		1770	3539
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	93	8	0	499	56	3	924
RTOR Reduction (vph)	7	0	0	13	0	0	0
Lane Group Flow (vph)	94	0	0	542	0	3	924
Turn Type			Prot			Prot	
Protected Phases	8		5	2		1	6
Permitted Phases							
Actuated Green, G (s)	3.1			14.8		0.6	19.4
Effective Green, g (s)	3.1			14.8		0.6	19.4
Actuated g/C Ratio	0.10			0.49		0.02	0.64
Clearance Time (s)	4.0			4.0		4.0	4.0
Vehicle Extension (s)	3.0			3.0		3.0	3.0
Lane Grp Cap (vph)	347			1692		35	2251
v/s Ratio Prot	c0.03			0.16		0.00	c0.26
v/s Ratio Perm							
v/c Ratio	0.27			0.32		0.09	0.41
Uniform Delay, d1	12.7			4.8		14.7	2.7
Progression Factor	1.00			1.00		1.00	1.00
Incremental Delay, d2	0.4			0.1		1.1	0.1
Delay (s)	13.1			4.9		15.7	2.9
Level of Service	B			A		B	A
Approach Delay (s)	13.1			4.9			2.9
Approach LOS	B			A			A

Intersection Summary			
HCM Average Control Delay	4.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	30.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



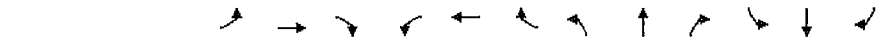
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	111	19	62	82	149	6	306	15	160	682	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	0.90		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1822		1770	1682		1770	3514		1770	3469	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1822		1770	1682		1770	3514		1770	3469	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	26	123	21	69	91	166	7	340	17	178	758	116
RTOR Reduction (vph)	0	11	0	0	114	0	0	6	0	0	17	0
Lane Group Flow (vph)	26	133	0	69	143	0	7	351	0	178	857	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	0.7	10.6		2.3	12.2		0.7	13.9		6.8	20.0	
Effective Green, g (s)	0.7	10.6		2.3	12.2		0.7	13.9		6.8	20.0	
Actuated g/C Ratio	0.01	0.21		0.05	0.25		0.01	0.28		0.14	0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	25	389		82	414		25	985		243	1399	
v/s Ratio Prot	0.01	0.07		c0.04	c0.09		0.00	0.10		c0.10	c0.25	
v/s Ratio Perm												
v/c Ratio	1.04	0.34		0.84	0.35		0.28	0.36		0.73	0.61	
Uniform Delay, d1	24.4	16.5		23.5	15.4		24.2	14.3		20.5	11.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	192.8	0.5		50.7	0.5		6.0	0.2		10.8	0.8	
Delay (s)	217.2	17.1		74.1	15.9		30.2	14.5		31.4	12.5	
Level of Service	F	B		E	B		C	B		C	B	
Approach Delay (s)		47.7			28.2			14.8			15.7	
Approach LOS		D			C			B			B	

Intersection Summary			
HCM Average Control Delay	20.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	49.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



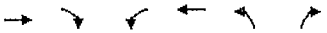
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	83	70	92	137	36	40	325	54	41	769	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.97		1.00	0.98		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1805		1770	3464		1770	3534	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1583	1770	1805		1770	3464		1770	3534	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	6	92	78	102	152	40	44	361	60	46	854	8
RTOR Reduction (vph)	0	0	64	0	17	0	0	20	0	0	1	0
Lane Group Flow (vph)	6	92	14	102	175	0	44	401	0	46	861	0
Turn Type	Prot		Prot	Prot			Prot			Prot		
Protected Phases	7	4	4	3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	0.6	8.4	8.4	3.5	11.3		1.3	17.4		1.3	17.4	
Effective Green, g (s)	0.6	8.4	8.4	3.5	11.3		1.3	17.4		1.3	17.4	
Actuated g/C Ratio	0.01	0.18	0.18	0.08	0.24		0.03	0.37		0.03	0.37	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	23	336	285	133	438		49	1293		49	1320	
v/s Ratio Prot	0.00	0.05	0.01	c0.06	c0.10		0.02	0.12		c0.03	c0.24	
v/s Ratio Perm												
v/c Ratio	0.26	0.27	0.05	0.77	0.40		0.90	0.31		0.94	0.65	
Uniform Delay, d1	22.8	16.5	15.8	21.1	14.8		22.6	10.3		22.6	12.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	6.0	0.4	0.1	22.8	0.6		90.0	0.1		104.4	1.2	
Delay (s)	28.7	16.9	15.9	44.0	15.4		112.6	10.5		127.0	13.3	
Level of Service	C	B	B	D	B		F	B		F	B	
Approach Delay (s)		16.9			25.3			20.1			19.0	
Approach LOS		B			C			C			B	

Intersection Summary				
HCM Average Control Delay	20.1	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.61			
Actuated Cycle Length (s)	46.6	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	46.6%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	93	855	23	87	855	196	68	56	83	445	22	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.95			1.00	1.00	0.95	0.95	
Frt	1.00	1.00		1.00	0.97			1.00	0.85	1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00	0.95	0.97	
Satd. Flow (prot)	1770	5065		1770	3440			1813	1583	1681	1638	
Flt Permitted	0.95	1.00		0.95	1.00			0.97	1.00	0.95	0.97	
Satd. Flow (perm)	1770	5065		1770	3440			1813	1583	1681	1638	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	103	950	26	97	950	218	76	62	92	494	24	91
RTOR Reduction (vph)	0	3	0	0	21	0	0	0	79	0	17	0
Lane Group Flow (vph)	103	973	0	97	1147	0	0	138	13	311	281	0
Turn Type	Prot			Prot			Split		Perm	Split		
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases									2			
Actuated Green, G (s)	7.0	31.2		7.6	31.8			11.6	11.6	17.7	17.7	
Effective Green, g (s)	7.0	31.2		7.6	31.8			11.6	11.6	17.7	17.7	
Actuated g/C Ratio	0.08	0.37		0.09	0.38			0.14	0.14	0.21	0.21	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	147	1879		160	1301			250	218	354	345	
v/s Ratio Prot	c0.06	0.19		0.05	c0.33			c0.08		c0.18	0.17	
v/s Ratio Perm									0.01			
v/c Ratio	0.70	0.52		0.61	0.88			0.55	0.06	0.88	0.81	
Uniform Delay, d1	37.5	20.6		36.8	24.4			33.8	31.5	32.2	31.6	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2	14.0	0.2		6.4	7.3			2.6	0.1	21.0	13.6	
Delay (s)	51.5	20.8		43.2	31.7			36.5	31.6	53.2	45.2	
Level of Service	D	C		D	C			D	C	D	D	
Approach Delay (s)		23.8			32.6			34.5			49.3	
Approach LOS		C			C			C			D	

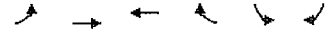
Intersection Summary				
HCM Average Control Delay	32.9	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.76			
Actuated Cycle Length (s)	84.1	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	67.1%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1395	53	0	1342	0	132
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	1550	59	0	1491	0	147
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	575			607		
pX, platoon unblocked			0.87		0.83	0.87
vC, conflicting volume			1609		2325	546
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1182		1257	0
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	84
cM capacity (veh/h)			511		135	945

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1
Volume Total	620	620	369	746	746	147
Volume Left	0	0	0	0	0	0
Volume Right	0	0	59	0	0	147
cSH	1700	1700	1700	1700	1700	945
Volume to Capacity	0.36	0.36	0.22	0.44	0.44	0.16
Queue Length 95th (ft)	0	0	0	0	0	14
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	9.5
Lane LOS						A
Approach Delay (s)	0.0			0.0		9.5
Approach LOS						A

Intersection Summary				
Average Delay	0.4			
Intersection Capacity Utilization	43.0%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	0	758	1010	0	923	326
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		0.97	0.91
Frt		1.00	1.00		0.99	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3539	3539		3430	1441
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3539	3539		3430	1441
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	842	1122	0	1026	362
RTOR Reduction (vph)	0	0	0	0	2	22
Lane Group Flow (vph)	0	842	1122	0	1060	304
Turn Type						Prot
Protected Phases		4	8		6	6
Permitted Phases						
Actuated Green, G (s)		48.4	48.4		63.6	63.6
Effective Green, g (s)		48.4	48.4		63.6	63.6
Actuated g/C Ratio		0.40	0.40		0.53	0.53
Clearance Time (s)		4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1427	1427		1818	764
v/s Ratio Prot		0.24	c0.32		c0.31	0.21
v/s Ratio Perm						
v/c Ratio		0.59	0.79		0.58	0.40
Uniform Delay, d1		28.0	31.3		19.2	16.8
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		0.7	2.9		1.4	1.6
Delay (s)		28.7	34.2		20.6	18.4
Level of Service		C	C		C	B
Approach Delay (s)		28.7	34.2		20.0	
Approach LOS		C	C		C	

Intersection Summary				
HCM Average Control Delay	27.0	HCM Level of Service		C
HCM Volume to Capacity ratio	0.67			
Actuated Cycle Length (s)	120.0	Sum of lost time (s)		8.0
Intersection Capacity Utilization	64.0%	ICU Level of Service		C
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	224	1437	0	0	1460	901	373	0	911	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	0.97	0.95			0.91	1.00	0.95	0.91	0.95			
Frt	1.00	1.00			1.00	0.85	1.00	0.86	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (prot)	3433	3539			5085	1583	1681	1455	1504			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (perm)	3433	3539			5085	1583	1681	1455	1504			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	249	1597	0	0	1622	1001	414	0	1012	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	455	0	14	14	0	0	0
Lane Group Flow (vph)	249	1597	0	0	1622	546	373	513	512	0	0	0
Turn Type	Prot					Prot	Split		Prot			
Protected Phases	7	4			8	8	2	2	2			
Permitted Phases												
Actuated Green, G (s)	10.0	67.0			53.0	53.0	45.0	45.0	45.0			
Effective Green, g (s)	10.0	67.0			53.0	53.0	45.0	45.0	45.0			
Actuated g/C Ratio	0.08	0.56			0.44	0.44	0.38	0.38	0.38			
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0			
Lane Grp Cap (vph)	286	1976			2246	699	630	546	564			
v/s Ratio Prot	0.07	c0.45			0.32	0.34	0.22	c0.35	0.34			
v/s Ratio Perm												
v/c Ratio	0.87	0.81			0.72	0.78	0.59	0.94	0.91			
Uniform Delay, d1	54.4	21.3			27.5	28.6	30.1	36.2	35.5			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	23.8	2.5			1.2	5.7	4.1	26.2	21.0			
Delay (s)	78.2	23.9			28.6	34.2	34.2	62.4	56.5			
Level of Service	E	C			C	C	C	E	E			
Approach Delay (s)		31.2			30.8			52.8			0.0	
Approach LOS		C			C			D			A	

Intersection Summary				
HCM Average Control Delay	36.2	HCM Level of Service	D	
HCM Volume to Capacity ratio	0.86			
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	91.8%	ICU Level of Service	F	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	108	1500	674	97	1852	64	195	10	38	104	57	303
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		0.97	0.95		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.88		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5060		3433	3119		1770	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5060		3433	3119		1770	1863	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	120	1667	749	108	2058	71	217	11	42	116	63	337
RTOR Reduction (vph)	0	0	369	0	4	0	0	37	0	0	0	139
Lane Group Flow (vph)	120	1667	380	108	2125	0	217	16	0	116	63	198
Turn Type	Prot		Prot	Prot			Prot			Prot		Prot
Protected Phases	7	4	4	3	8		5	2		1	6	6
Permitted Phases												
Actuated Green, G (s)	7.9	41.3	41.3	6.7	40.1		7.0	10.9		12.1	16.0	16.0
Effective Green, g (s)	7.9	41.3	41.3	6.7	40.1		7.0	10.9		12.1	16.0	16.0
Actuated g/C Ratio	0.09	0.47	0.47	0.08	0.46		0.08	0.13		0.14	0.18	0.18
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	161	2414	751	136	2332		276	391		246	343	291
v/s Ratio Prot	c0.07	0.33	0.24	0.06	c0.42		c0.06	0.01		0.07	0.03	c0.13
v/s Ratio Perm												
v/c Ratio	0.75	0.69	0.51	0.79	0.91		0.79	0.04		0.47	0.18	0.68
Uniform Delay, d1	38.6	17.9	15.8	39.5	21.8		39.3	33.5		34.5	30.0	33.1
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	17.0	0.9	0.5	26.4	5.9		13.7	0.0		1.4	0.3	6.4
Delay (s)	55.6	18.7	16.3	65.9	27.7		53.0	33.5		35.9	30.2	39.6
Level of Service	E	B	B	E	C		D	C		D	C	D
Approach Delay (s)		19.8			29.6			49.1			37.6	
Approach LOS		B			C			D			D	

Intersection Summary				
HCM Average Control Delay	26.8	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.83			
Actuated Cycle Length (s)	87.0	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	71.5%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↱	↰	↑↑↑	↰↰	↱
Volume (vph)	1437	205	123	1984	40	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	5085	1583	1770	5085	3433	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	5085	1583	1770	5085	3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1562	223	134	2157	43	26
RTOR Reduction (vph)	0	103	0	0	0	24
Lane Group Flow (vph)	1562	120	134	2157	43	2
Turn Type		Perm	Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	25.0	25.0	5.9	34.9	3.4	3.4
Effective Green, g (s)	25.0	25.0	5.9	34.9	3.4	3.4
Actuated g/C Ratio	0.54	0.54	0.13	0.75	0.07	0.07
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2746	855	226	3833	252	116
v/s Ratio Prot	0.31		0.08	c0.42	c0.01	
v/s Ratio Perm		0.08				0.00
v/c Ratio	0.57	0.14	0.59	0.56	0.17	0.02
Uniform Delay, d1	7.1	5.3	19.1	2.4	20.1	19.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	0.1	4.1	0.2	0.3	0.1
Delay (s)	7.3	5.4	23.2	2.6	20.5	20.0
Level of Service	A	A	C	A	C	B
Approach Delay (s)	7.1			3.8	20.3	
Approach LOS	A			A	C	

Intersection Summary				
HCM Average Control Delay	5.5	HCM Level of Service	A	
HCM Volume to Capacity ratio	0.53			
Actuated Cycle Length (s)	46.3	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	48.3%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↱	↰↰	↑↑↑	↰	↱
Volume (vph)	1296	165	82	2075	32	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	0.97	0.91	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	5085	1583	3433	5085	1770	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	5085	1583	3433	5085	1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1409	179	89	2255	35	17
RTOR Reduction (vph)	0	71	0	0	0	16
Lane Group Flow (vph)	1409	108	89	2255	35	1
Turn Type		Perm	Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	24.0	24.0	1.3	29.3	2.4	2.4
Effective Green, g (s)	24.0	24.0	1.3	29.3	2.4	2.4
Actuated g/C Ratio	0.60	0.60	0.03	0.74	0.06	0.06
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	3074	957	112	3753	107	96
v/s Ratio Prot	0.28		0.03	c0.44	c0.02	
v/s Ratio Perm		0.07				0.00
v/c Ratio	0.46	0.11	0.79	0.60	0.33	0.01
Uniform Delay, d1	4.3	3.3	19.1	2.4	17.9	17.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.1	31.0	0.3	1.8	0.0
Delay (s)	4.4	3.4	50.1	2.7	19.7	17.6
Level of Service	A	A	D	A	B	B
Approach Delay (s)	4.3			4.5	19.0	
Approach LOS	A			A	B	

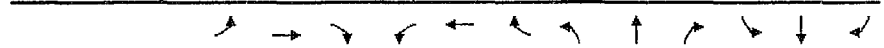
Intersection Summary				
HCM Average Control Delay	4.6	HCM Level of Service	A	
HCM Volume to Capacity ratio	0.58			
Actuated Cycle Length (s)	39.7	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	50.1%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	219	903	195	287	1505	92	222	104	87	159	312	430
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.91		0.97	0.91		0.97	0.91	1.00	0.97	0.91	
Frt	1.00	0.97		1.00	0.99		1.00	1.00	0.85	1.00	0.91	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	4950		3433	5041		3433	5085	1583	3433	4643	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3433	4950		3433	5041		3433	5085	1583	3433	4643	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	243	1003	217	319	1672	102	247	116	97	177	347	478
RTOR Reduction (vph)	0	41	0	0	8	0	0	0	78	0	159	0
Lane Group Flow (vph)	243	1179	0	319	1766	0	247	116	19	177	666	0
Turn Type	Prot			Prot			Prot		Prot	Prot		
Protected Phases	7	4		3	8		5	2	2	1	6	
Permitted Phases												
Actuated Green, G (s)	7.4	26.9		10.5	30.0		7.4	15.0	15.0	10.2	17.8	
Effective Green, g (s)	7.4	26.9		10.5	30.0		7.4	15.0	15.0	10.2	17.8	
Actuated g/C Ratio	0.09	0.34		0.13	0.38		0.09	0.19	0.19	0.13	0.23	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	323	1694		459	1924		323	970	302	446	1051	
v/s Ratio Prot	0.07	0.24		c0.09	c0.35		c0.07	0.02	0.01	0.05	c0.14	
v/s Ratio Perm												
v/c Ratio	0.75	0.70		0.69	0.92		0.76	0.12	0.06	0.40	0.94dr	
Uniform Delay, d1	34.7	22.3		32.5	23.1		34.8	26.3	26.0	31.4	27.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	9.5	1.3		4.5	7.4		10.3	0.1	0.1	0.6	1.3	
Delay (s)	44.2	23.6		37.1	30.6		45.0	26.4	26.1	32.0	28.7	
Level of Service	D	C		D	C		D	C	C	C	C	
Approach Delay (s)		27.0			31.6			36.4			29.3	
Approach LOS		C			C			D			C	

Intersection Summary				
HCM Average Control Delay	30.2	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.81			
Actuated Cycle Length (s)	78.6	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	72.7%	ICU Level of Service	C	
Analysis Period (min)	15			

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	144	612	283	272	1215	169	418	183	108	142	180	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	0.97	0.91		0.97	0.91		0.97	0.91		1.00	0.95	
Frt	1.00	0.95		1.00	0.98		1.00	0.94		1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	4844		3433	4992		3433	4802		1770	3301	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	4844		3433	4992		3433	4802		1770	3301	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	160	680	314	302	1350	188	464	203	120	158	200	163
RTOR Reduction (vph)	0	98	0	0	21	0	0	99	0	0	140	0
Lane Group Flow (vph)	160	896	0	302	1517	0	464	224	0	158	223	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	6.0	23.1		9.9	27.0		12.6	12.6		10.0	10.0	
Effective Green, g (s)	6.0	23.1		9.9	27.0		12.6	12.6		10.0	10.0	
Actuated g/C Ratio	0.08	0.32		0.14	0.38		0.18	0.18		0.14	0.14	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	288	1563		475	1882		604	845		247	461	
v/s Ratio Prot	0.05	0.18		c0.09	c0.30		c0.14	c0.05		0.09	c0.07	
v/s Ratio Perm												
v/c Ratio	0.56	0.57		0.64	0.81		0.77	0.27		0.64	0.48	
Uniform Delay, d1	31.5	20.2		29.1	20.0		28.1	25.5		29.1	28.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.3	0.5		2.8	2.6		5.8	0.2		5.4	0.8	
Delay (s)	33.8	20.7		31.9	22.6		33.9	25.7		34.5	29.2	
Level of Service	C	C		C	C		C	C		C	C	
Approach Delay (s)		22.5			24.1			30.5			30.8	
Approach LOS		C			C			C			C	

Intersection Summary				
HCM Average Control Delay	25.7	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.78			
Actuated Cycle Length (s)	71.6	Sum of lost time (s)	20.0	
Intersection Capacity Utilization	66.3%	ICU Level of Service	C	
Analysis Period (min)	15			

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	206	634	118	79	1067	210	110	151	11	54	60	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.99		1.00	0.90	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	4966		1770	4960		1770	1844		1770	1674	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	4966		1770	4960		1770	1844		1770	1674	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	229	704	131	88	1186	233	122	168	12	60	67	139
RTOR Reduction (vph)	0	32	0	0	36	0	0	4	0	0	110	0
Lane Group Flow (vph)	229	803	0	88	1383	0	122	176	0	60	96	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	12.0	27.3		6.7	22.0		6.0	14.7		2.8	11.5	
Effective Green, g (s)	12.0	27.3		6.7	22.0		6.0	14.7		2.8	11.5	
Actuated g/C Ratio	0.18	0.40		0.10	0.33		0.09	0.22		0.04	0.17	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	315	2008		176	1617		157	402		73	285	
v/s Ratio Prot	c0.13	0.16		0.05	c0.28		c0.07	c0.10		0.03	0.06	
v/s Ratio Perm												
v/c Ratio	0.73	0.40		0.50	0.86		0.78	0.44		0.82	0.34	
Uniform Delay, d1	26.2	14.3		28.8	21.3		30.1	22.8		32.1	24.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	8.1	0.1		2.2	4.7		21.1	0.8		49.9	0.7	
Delay (s)	34.3	14.4		31.0	25.9		51.2	23.6		82.0	25.3	
Level of Service	C	B		C	C		D	C		F	C	
Approach Delay (s)		18.7			26.2			34.7			38.1	
Approach LOS		B			C			C			D	

Intersection Summary				
HCM Average Control Delay	25.5	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.72			
Actuated Cycle Length (s)	67.5	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	67.0%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	151	554	34	65	1109	35	43	25	53	48	58	349
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	1.00		1.00	0.90		1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5041		1770	5062		1770	1673		1770	1623	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	5041		1770	5062		1770	1673		1770	1623	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	168	616	38	72	1232	39	48	28	59	53	64	388
RTOR Reduction (vph)	0	9	0	0	5	0	0	47	0	0	236	0
Lane Group Flow (vph)	168	645	0	72	1266	0	48	40	0	53	216	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	6.2	22.4		2.7	18.9		1.7	11.0		2.4	11.7	
Effective Green, g (s)	6.2	22.4		2.7	18.9		1.7	11.0		2.4	11.7	
Actuated g/C Ratio	0.11	0.41		0.05	0.35		0.03	0.20		0.04	0.21	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	201	2072		88	1755		55	338		78	348	
v/s Ratio Prot	c0.09	c0.13		0.04	c0.25		0.03	0.02		c0.03	c0.13	
v/s Ratio Perm												
v/c Ratio	0.84	0.31		0.82	0.72		0.87	0.12		0.68	0.62	
Uniform Delay, d1	23.7	10.8		25.7	15.5		26.3	17.8		25.7	19.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	24.8	0.1		42.2	1.5		76.2	0.2		21.0	3.3	
Delay (s)	48.5	10.9		67.9	17.0		102.5	17.9		46.7	22.7	
Level of Service	D	B		E	B		F	B		D	C	
Approach Delay (s)		18.6			19.7			48.0			25.2	
Approach LOS		B			B			D			C	

Intersection Summary				
HCM Average Control Delay	21.7	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.68			
Actuated Cycle Length (s)	54.5	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	71.8%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	548	122	385	992	265	332
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.91		1.00	0.91	0.97	1.00
Frt	0.97		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	4946		1770	5085	3433	1583
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	4946		1770	5085	3433	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	609	136	428	1102	294	369
RTOR Reduction (vph)	60	0	0	0	0	294
Lane Group Flow (vph)	585	0	428	1102	294	75
Turn Type			Prot			Prot
Protected Phases	4		3	8	2	2
Permitted Phases						
Actuated Green, G (s)	13.6		15.2	32.8	10.4	10.4
Effective Green, g (s)	13.6		15.2	32.8	10.4	10.4
Actuated g/C Ratio	0.27		0.30	0.64	0.20	0.20
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1314		525	3258	697	322
v/s Ratio Prot	c0.14		c0.24	0.22	c0.09	0.05
v/s Ratio Perm						
v/c Ratio	0.52		0.82	0.34	0.42	0.23
Uniform Delay, d1	16.0		16.7	4.2	17.8	17.1
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4		9.5	0.1	0.4	0.4
Delay (s)	16.4		26.2	4.3	18.2	17.4
Level of Service	B		C	A	B	B
Approach Delay (s)	16.4			10.4	17.8	
Approach LOS	B			B	B	

Intersection Summary				
HCM Average Control Delay	13.6	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.61			
Actuated Cycle Length (s)	51.2	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	52.2%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	16	5	5	94	25	107	99	308	98	160	665	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.95	0.95			1.00	1.00	0.97	0.91		0.97	0.91	1.00
Frt	1.00	0.94			1.00	0.85	1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	0.99			0.96	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1647			1792	1583	3433	4901		3433	5085	1583
Flt Permitted	0.48	0.41			0.96	1.00	0.36	1.00		0.95	1.00	1.00
Satd. Flow (perm)	853	679			1792	1583	1298	4901		3433	5085	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	18	6	6	104	28	119	110	342	109	178	739	46
RTOR Reduction (vph)	0	5	0	0	0	102	0	68	0	0	0	25
Lane Group Flow (vph)	15	10	0	0	132	17	110	383	0	178	739	21
Turn Type	Perm			Split		Perm	Perm			Prot		Perm
Protected Phases		2		6	6			8		7	4	
Permitted Phases	2					6	8					4
Actuated Green, G (s)	8.3	8.3			7.3	7.3	12.5	12.5		5.7	22.2	22.2
Effective Green, g (s)	8.3	8.3			7.3	7.3	12.5	12.5		5.7	22.2	22.2
Actuated g/C Ratio	0.17	0.17			0.15	0.15	0.25	0.25		0.11	0.45	0.45
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	142	113			263	232	326	1230		393	2267	706
v/s Ratio Prot					c0.07			0.08		c0.05	c0.15	
v/s Ratio Perm	c0.02	0.01				0.01	0.08					0.01
v/c Ratio	0.11	0.09			0.50	0.08	0.34	0.31		0.45	0.33	0.03
Uniform Delay, d1	17.6	17.6			19.6	18.3	15.3	15.2		20.6	8.9	7.7
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.3	0.3			1.5	0.1	0.6	0.1		0.8	0.1	0.0
Delay (s)	17.9	17.9			21.1	18.5	15.9	15.3		21.4	9.0	7.8
Level of Service	B	B			C	B	B	B		C	A	A
Approach Delay (s)		17.9			19.8			15.4			11.3	
Approach LOS		B			B			B			B	

Intersection Summary				
HCM Average Control Delay	13.9	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.32			
Actuated Cycle Length (s)	49.8	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	39.4%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	166	83	113	45	189	149	111	430	7	100	446	165
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.93		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1739		1770	3530		1770	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	1863	1583	1770	1739		1770	3530		1770	3539	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	184	92	126	50	210	166	123	478	8	111	496	183
RTOR Reduction (vph)	0	0	77	0	36	0	0	2	0	0	0	142
Lane Group Flow (vph)	184	92	49	50	340	0	123	484	0	111	496	41
Turn Type	Prot		Prot	Prot			Prot			Prot		Prot
Protected Phases	7	4	4	3	8		5	2		1	6	6
Permitted Phases												
Actuated Green, G (s)	12.0	26.3	26.3	3.5	17.8		7.1	16.1		6.1	15.1	15.1
Effective Green, g (s)	12.0	26.3	26.3	3.5	17.8		7.1	16.1		6.1	15.1	15.1
Actuated g/C Ratio	0.18	0.39	0.39	0.05	0.26		0.10	0.24		0.09	0.22	0.22
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	312	721	612	91	455		185	836		159	786	352
v/s Ratio Prot	c0.10	0.05	0.03	0.03	c0.20		c0.07	0.14		0.06	c0.14	0.03
v/s Ratio Perm												
v/c Ratio	0.59	0.13	0.08	0.55	0.75		0.66	0.58		0.70	0.63	0.12
Uniform Delay, d1	25.7	13.4	13.2	31.5	23.0		29.3	23.0		30.1	23.9	21.1
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.8	0.1	0.1	6.6	6.6		8.7	1.0		12.6	1.7	0.1
Delay (s)	28.6	13.5	13.2	38.1	29.6		38.0	23.9		42.6	25.6	21.3
Level of Service	C	B	B	D	C		D	C		D	C	C
Approach Delay (s)		20.3			30.6			26.8			27.0	
Approach LOS		C			C			C			C	

Intersection Summary				
HCM Average Control Delay	26.4	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.67			
Actuated Cycle Length (s)	68.0	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	60.1%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	38	67	6	226	45	137	14	312	52	146	457	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.91		1.00	0.91	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1839		1770	1863	1583	1770	4976		1770	4989	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1839		1770	1863	1583	1770	4976		1770	4989	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	42	74	7	251	50	152	16	347	58	162	508	73
RTOR Reduction (vph)	0	5	0	0	0	110	0	33	0	0	24	0
Lane Group Flow (vph)	42	76	0	251	50	42	16	372	0	162	557	0
Turn Type	Prot			Prot		Prot	Prot			Prot		
Protected Phases	1	6		5	2	2	7	4		3	8	
Permitted Phases												
Actuated Green, G (s)	2.0	5.4		11.6	15.0	15.0	0.7	13.1		8.2	20.6	
Effective Green, g (s)	2.0	5.4		11.6	15.0	15.0	0.7	13.1		8.2	20.6	
Actuated g/C Ratio	0.04	0.10		0.21	0.28	0.28	0.01	0.24		0.15	0.38	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	65	183		378	515	437	23	1200		267	1893	
v/s Ratio Prot	0.02	c0.04		c0.14	0.03	0.03	0.01	0.07		c0.09	c0.11	
v/s Ratio Perm												
v/c Ratio	0.65	0.41		0.66	0.10	0.10	0.70	0.31		0.61	0.29	
Uniform Delay, d1	25.8	23.0		19.6	14.6	14.6	26.7	16.9		21.5	11.8	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	20.0	1.5		4.4	0.1	0.1	63.9	0.1		3.9	0.1	
Delay (s)	45.8	24.5		23.9	14.7	14.7	90.6	17.0		25.4	11.9	
Level of Service	D	C		C	B	B	F	B		C	B	
Approach Delay (s)		31.7			19.8			19.8			14.8	
Approach LOS		C			B			B			B	

Intersection Summary				
HCM Average Control Delay	18.5	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.46			
Actuated Cycle Length (s)	54.3	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	44.5%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	304	118	123	60	291	29	269	413	28	66	400	387
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85		0.99		1.00	0.99		1.00	0.93	
Flt Protected	0.95	1.00	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583		1829		1770	3506		1770	3278	
Flt Permitted	0.95	1.00	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1583		1829		1770	3506		1770	3278	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	320	124	129	63	306	31	283	435	29	69	421	407
RTOR Reduction (vph)	0	0	103	0	4	0	0	6	0	0	216	0
Lane Group Flow (vph)	320	124	26	0	396	0	283	458	0	69	612	0
Turn Type	Split		Prot	Split			Prot			Prot		
Protected Phases	4	4	4	8	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	16.0	16.0	16.0		17.4		13.2	24.1		6.6	17.5	
Effective Green, g (s)	16.0	16.0	16.0		17.4		13.2	24.1		6.6	17.5	
Actuated g/C Ratio	0.20	0.20	0.20		0.22		0.16	0.30		0.08	0.22	
Clearance Time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	354	372	316		397		292	1055		146	716	
v/s Ratio Prot	c0.18	0.07	0.02		c0.22		c0.16	0.13		0.04	c0.19	
v/s Ratio Perm												
v/c Ratio	0.90	0.33	0.08		1.00		0.97	0.43		0.47	0.86	
Uniform Delay, d1	31.3	27.5	26.1		31.3		33.2	22.5		35.1	30.1	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	25.3	0.5	0.1		44.2		43.7	0.3		2.4	9.8	
Delay (s)	56.6	28.0	26.2		75.6		77.0	22.8		37.5	39.9	
Level of Service	E	C	C		E		E	C		D	D	
Approach Delay (s)		43.6			75.6			43.3			39.7	
Approach LOS		D			E			D			D	

Intersection Summary				
HCM Average Control Delay	47.1	HCM Level of Service	D	
HCM Volume to Capacity ratio	0.93			
Actuated Cycle Length (s)	80.1	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	89.0%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBR	EBR2	NWL2	NWL	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	30	110	245	94	221	96	212	316	29	74	875	107
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.97		0.97	0.91		1.00	0.91	
Frt	1.00	0.85	0.85	1.00	0.95		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1583	1583	1770	3333		3433	5022		1770	5002	
Flt Permitted	0.95	1.00	1.00	0.95	0.97		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1583	1583	1770	3333		3433	5022		1770	5002	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	33	122	272	104	246	107	236	351	32	82	972	119
RTOR Reduction (vph)	0	0	203	0	86	0	0	16	0	0	25	0
Lane Group Flow (vph)	33	122	69	104	267	0	236	367	0	82	1066	0
Turn Type		Perm	Perm	Split			Prot			Prot		
Protected Phases	2			6	6		3	8		7	4	
Permitted Phases		2	2									
Actuated Green, G (s)	15.3	15.3	15.3	5.8	5.8		5.0	18.7		4.2	17.9	
Effective Green, g (s)	15.3	15.3	15.3	5.8	5.8		5.0	18.7		4.2	17.9	
Actuated g/C Ratio	0.26	0.26	0.26	0.10	0.10		0.08	0.31		0.07	0.30	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	451	404	404	171	322		286	1565		124	1492	
v/s Ratio Prot	0.02			0.06	c0.08		c0.07	0.07		0.05	c0.21	
v/s Ratio Perm		c0.08	0.04									
v/c Ratio	0.07	0.30	0.17	0.61	0.83		0.83	0.23		0.66	0.71	
Uniform Delay, d1	17.0	18.0	17.4	26.0	26.6		27.1	15.3		27.2	18.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	1.9	0.9	6.0	16.0		17.3	0.1		12.5	1.7	
Delay (s)	17.3	20.0	18.3	32.0	42.7		44.4	15.4		39.7	20.4	
Level of Service	B	B	B	C	D		D	B		D	C	
Approach Delay (s)	18.7				40.2			26.5			21.8	
Approach LOS	B				D			C			C	

Intersection Summary				
HCM Average Control Delay	25.5	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.60			
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	51.3%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	47	6	68	13	26	14	121	30	2	3	16	191
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	52	7	76	14	29	16	134	33	2	3	18	212

Direction, Lane #	SE 1	SE 2	NW 1	NE 1	SW 1
Volume Total (vph)	59	76	59	170	233
Volume Left (vph)	52	0	14	134	3
Volume Right (vph)	0	76	16	2	212
Hadj (s)	0.48	-0.67	-0.08	0.18	-0.51
Departure Headway (s)	6.0	4.8	5.0	4.8	4.1
Degree Utilization, x	0.10	0.10	0.08	0.23	0.27
Capacity (veh/h)	560	689	645	708	829
Control Delay (s)	8.4	7.2	8.5	9.3	8.6
Approach Delay (s)	7.7		8.5	9.3	8.6
Approach LOS	A		A	A	A

Intersection Summary				
Delay	8.6			
HCM Level of Service	A			
Intersection Capacity Utilization	40.8%	ICU Level of Service	A	
Analysis Period (min)	15			

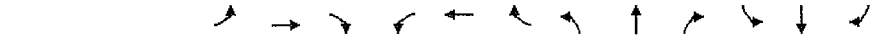
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	52	89	116	199	61	24	30	289	81	15	761	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85		0.99		1.00	0.97		1.00	0.98	
Flt Protected		0.98	1.00		0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1829	1583		1779		1770	3423		1770	3457	
Flt Permitted		0.98	1.00		0.97		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1829	1583		1779		1770	3423		1770	3457	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	58	99	129	221	68	27	33	321	90	17	846	156
RTOR Reduction (vph)	0	0	109	0	4	0	0	28	0	0	17	0
Lane Group Flow (vph)	0	157	20	0	312	0	33	383	0	17	985	0
Turn Type	Split		Prot	Split			Prot			Prot		
Protected Phases	4	4	4	8	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)		11.7	11.7		16.7		2.4	28.8		0.8	27.2	
Effective Green, g (s)		11.7	11.7		16.7		2.4	28.8		0.8	27.2	
Actuated g/C Ratio		0.16	0.16		0.23		0.03	0.39		0.01	0.37	
Clearance Time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		289	250		401		57	1332		19	1271	
v/s Ratio Prot		c0.09	0.01		c0.18		c0.02	0.11		0.01	c0.28	
v/s Ratio Perm												
v/c Ratio		0.54	0.08		0.78		0.58	0.29		0.89	0.77	
Uniform Delay, d1		28.7	26.6		26.9		35.3	15.5		36.6	20.7	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		2.1	0.1		9.2		13.5	0.1		155.2	3.0	
Delay (s)		30.8	26.7		36.1		48.8	15.7		191.7	23.7	
Level of Service		C	C		D		D	B		F	C	
Approach Delay (s)		28.9			36.1			18.1			26.5	
Approach LOS		C			D			B			C	

Intersection Summary				
HCM Average Control Delay	26.5	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.72			
Actuated Cycle Length (s)	74.0	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	58.4%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	302	176	382	618	0	0	0	0	997	3	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		0.97	0.95					0.95	0.91	0.95
Frt		0.94		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.95	1.00
Satd. Flow (prot)		3344		3433	3539					1681	1610	1504
Flt Permitted		1.00		0.95	1.00					0.95	0.95	1.00
Satd. Flow (perm)		3344		3433	3539					1681	1610	1504
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	336	196	424	687	0	0	0	0	1108	3	160
RTOR Reduction (vph)	0	137	0	0	0	0	0	0	0	0	2	84
Lane Group Flow (vph)	0	395	0	424	687	0	0	0	0	565	560	60
Turn Type				Prot						Split		Prot
Protected Phases		4		3	8					6	6	6
Permitted Phases												
Actuated Green, G (s)		12.2		9.9	26.1					24.7	24.7	24.7
Effective Green, g (s)		12.2		9.9	26.1					24.7	24.7	24.7
Actuated g/C Ratio		0.21		0.17	0.44					0.42	0.42	0.42
Clearance Time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		694		578	1571					706	676	632
v/s Ratio Prot		c0.12		c0.12	0.19					0.34	c0.35	0.04
v/s Ratio Perm												
v/c Ratio		0.57		0.73	0.44					0.80	0.83	0.10
Uniform Delay, d1		20.9		23.2	11.3					14.9	15.2	10.3
Progression Factor		1.00		1.00	1.00					1.00	1.00	1.00
Incremental Delay, d2		1.1		4.8	0.2					6.5	8.3	0.1
Delay (s)		22.0		28.0	11.5					21.4	23.5	10.4
Level of Service		C		C	B					C	C	B
Approach Delay (s)		22.0			17.8			0.0			21.0	
Approach LOS		C			B			A			C	

Intersection Summary				
HCM Average Control Delay	20.0	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.74			
Actuated Cycle Length (s)	58.8	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	73.6%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	61	1183	0	0	928	834	106	2	547	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	0.97	0.95			0.95	1.00	0.95	0.91	0.95			
Frt	1.00	1.00			1.00	0.85	1.00	0.86	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (prot)	3433	3539			3539	1583	1681	1449	1504			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (perm)	3433	3539			3539	1583	1681	1449	1504			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	68	1314	0	0	1031	927	118	2	608	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	494	0	37	37	0	0	0
Lane Group Flow (vph)	68	1314	0	0	1031	433	106	275	273	0	0	0
Turn Type	Prot					Prot	Split		Prot			
Protected Phases	7	4			8	8	2	2	2			
Permitted Phases												
Actuated Green, G (s)	2.4	31.6			25.2	25.2	14.4	14.4	14.4			
Effective Green, g (s)	2.4	31.6			25.2	25.2	14.4	14.4	14.4			
Actuated g/C Ratio	0.04	0.59			0.47	0.47	0.27	0.27	0.27			
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0			
Lane Grp Cap (vph)	153	2071			1652	739	448	386	401			
v/s Ratio Prot	0.02	c0.37			0.29	0.27	0.06	c0.19	0.18			
v/s Ratio Perm												
v/c Ratio	0.44	0.63			0.62	0.59	0.24	0.71	0.68			
Uniform Delay, d1	25.2	7.4			10.8	10.6	15.5	17.9	17.7			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	2.1	0.6			0.7	1.2	0.3	6.1	4.5			
Delay (s)	27.2	8.0			11.6	11.8	15.8	24.0	22.3			
Level of Service	C	A			B	B	B	C	C			
Approach Delay (s)		9.0			11.7			22.1			0.0	
Approach LOS		A			B			C			A	

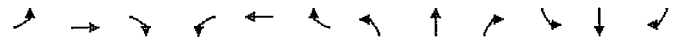
Intersection Summary				
HCM Average Control Delay	12.6	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.66			
Actuated Cycle Length (s)	54.0	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	73.6%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	6	16	704	14	158	69	906	145	116	1051	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.95	0.91	0.95	0.95	0.91	0.95	1.00	0.91		1.00	0.91	
Frt	1.00	0.97	0.85	1.00	0.99	0.85	1.00	0.98		1.00	1.00	
Flt Protected	0.95	0.98	1.00	0.95	0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1681	1617	1504	1681	1610	1504	1770	4980		1770	5073	
Flt Permitted	0.95	0.98	1.00	0.95	0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1681	1617	1504	1681	1610	1504	1770	4980		1770	5073	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	22	7	18	782	16	176	77	1007	161	129	1168	19
RTOR Reduction (vph)	0	3	14	0	2	105	0	21	0	0	2	0
Lane Group Flow (vph)	16	13	1	407	407	53	77	1147	0	129	1185	0
Turn Type	Split		Prot	Split		Prot	Prot			Prot		
Protected Phases	4	4	4	8	8	8	5	2!		6!		
Permitted Phases											6	
Actuated Green, G (s)	3.6	3.6	3.6	23.8	23.8	23.8	4.4	32.1		23.7	23.7	
Effective Green, g (s)	3.6	3.6	3.6	23.8	23.8	23.8	4.4	32.1		23.7	23.7	
Actuated g/C Ratio	0.05	0.05	0.05	0.33	0.33	0.33	0.06	0.45		0.33	0.33	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	85	81	76	560	536	501	109	2236		587	1682	
v/s Ratio Prot	c0.01	0.01	0.00	0.24	c0.25	0.03	c0.04	0.23		0.07		
v/s Ratio Perm											c0.23	
v/c Ratio	0.19	0.16	0.01	0.73	0.76	0.10	0.71	0.51		0.22	0.70	
Uniform Delay, d1	32.5	32.5	32.3	21.0	21.3	16.5	32.9	14.1		17.2	20.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.1	0.9	0.1	4.7	6.1	0.1	18.8	0.2		0.2	1.4	
Delay (s)	33.6	33.5	32.3	25.7	27.4	16.6	51.7	14.3		17.4	22.2	
Level of Service	C	C	C	C	C	B	D	B		B	C	
Approach Delay (s)		33.1			24.9			16.6			21.7	
Approach LOS		C			C			B			C	

Intersection Summary				
HCM Average Control Delay	21.0	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.69			
Actuated Cycle Length (s)	71.5	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	65.3%	ICU Level of Service	C	
Analysis Period (min)	15			

! Phase conflict between lane groups.
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	308	1008	200	147	821	0	0	550	632
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0	4.0	4.0	4.0	4.0			4.0	4.0
Lane Util. Factor				0.97	0.91	1.00	0.97	0.95			0.86	0.86
Frpb, ped/bikes				1.00	1.00	1.00	1.00	1.00			0.92	1.00
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00			1.00	1.00
Frt				1.00	1.00	0.85	1.00	1.00			0.95	0.85
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				3433	5085	1583	3433	3539			4189	1362
Flt Permitted				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)				3433	5085	1583	3433	3539			4189	1362
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	342	1120	222	163	912	0	0	611	702
RTOR Reduction (vph)	0	0	0	0	0	89	0	0	0	0	22	22
Lane Group Flow (vph)	0	0	0	342	1120	133	163	912	0	0	940	329
Confl. Peds. (#/hr)												200
Turn Type				Prot		Perm	Prot					Prot
Protected Phases				3	8		5	2			6	6
Permitted Phases						8						
Actuated Green, G (s)				17.4	17.4	17.4	4.4	29.5			21.1	21.1
Effective Green, g (s)				17.4	17.4	17.4	4.4	29.5			21.1	21.1
Actuated g/C Ratio				0.32	0.32	0.32	0.08	0.54			0.38	0.38
Clearance Time (s)				4.0	4.0	4.0	4.0	4.0			4.0	4.0
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)				1088	1612	502	275	1902			1610	523
v/s Ratio Prot				0.10	c0.22		0.05	c0.26			0.22	c0.24
v/s Ratio Perm						0.08						
v/c Ratio				0.31	0.69	0.27	0.59	0.48			0.58	0.63
Uniform Delay, d1				14.2	16.4	14.0	24.4	7.9			13.4	13.7
Progression Factor				1.00	1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2				0.2	1.3	0.3	3.4	0.2			0.5	2.4
Delay (s)				14.4	17.7	14.3	27.8	8.1			14.0	16.1
Level of Service				B	B	B	C	A			B	B
Approach Delay (s)		0.0			16.6			11.1			14.5	
Approach LOS		A			B			B			B	

Intersection Summary				
HCM Average Control Delay	14.5	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.66			
Actuated Cycle Length (s)	54.9	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	95.8%	ICU Level of Service	F	
Analysis Period (min)	15			

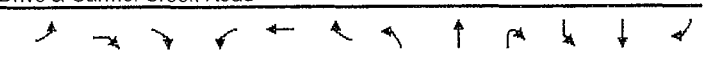
c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	589	896	265	0	0	0	0	362	192	114	679	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Lane Util. Factor	0.91	0.86	0.91					0.86		1.00	0.91	
Frt	1.00	1.00	0.85					0.95		1.00	1.00	
Flt Protected	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	1610	3176	1441					6075		1770	5085	
Flt Permitted	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	1610	3176	1441					6075		1770	5085	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	654	996	294	0	0	0	0	402	213	127	754	0
RTOR Reduction (vph)	0	3	70	0	0	0	0	56	0	0	0	0
Lane Group Flow (vph)	543	1133	195	0	0	0	0	559	0	127	754	0
Turn Type	Split		Prot							Prot		
Protected Phases	4	4	4					2		1	6	
Permitted Phases												
Actuated Green, G (s)	23.7	23.7	23.7					11.8		4.5	20.3	
Effective Green, g (s)	23.7	23.7	23.7					11.8		4.5	20.3	
Actuated g/C Ratio	0.46	0.46	0.46					0.23		0.09	0.39	
Clearance Time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	734	1448	657					1379		153	1985	
v/s Ratio Prot	0.34	c0.36	0.14					0.09		c0.07	c0.15	
v/s Ratio Perm												
v/c Ratio	0.74	0.78	0.30					0.41		0.83	0.38	
Uniform Delay, d1	11.6	12.0	8.9					17.1		23.4	11.3	
Progression Factor	1.00	1.00	1.00					1.00		1.00	1.00	
Incremental Delay, d2	3.9	2.8	0.3					0.2		30.0	0.1	
Delay (s)	15.5	14.8	9.2					17.3		53.4	11.5	
Level of Service	B	B	A					B		D	B	
Approach Delay (s)		14.2			0.0			17.3			17.5	
Approach LOS		B			A			B			B	

Intersection Summary				
HCM Average Control Delay	15.6	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.63			
Actuated Cycle Length (s)	52.0	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	95.8%	ICU Level of Service	F	
Analysis Period (min)	15			
c Critical Lane Group				

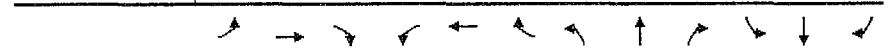
Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Volume (vph)	16	209	0	426	24	94	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		0.95		1.00	1.00
Frt	1.00	1.00		0.99		1.00	0.85
Flt Protected	0.95	1.00		1.00		0.95	1.00
Satd. Flow (prot)	1770	3539		3511		1770	1583
Flt Permitted	0.95	1.00		1.00		0.95	1.00
Satd. Flow (perm)	1770	3539		3511		1770	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	18	232	0	473	27	104	124
RTOR Reduction (vph)	0	0	0	8	0	0	105
Lane Group Flow (vph)	18	232	0	492	0	104	19
Turn Type	Prot		Prot				Prot
Protected Phases	7	4	3	8		6	6
Permitted Phases							
Actuated Green, G (s)	0.5	12.7		8.2		3.8	3.8
Effective Green, g (s)	0.5	12.7		8.2		3.8	3.8
Actuated g/C Ratio	0.02	0.52		0.33		0.16	0.16
Clearance Time (s)	4.0	4.0		4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0		3.0	3.0
Lane Grp Cap (vph)	36	1835		1175		275	246
v/s Ratio Prot	0.01	c0.07		c0.14		c0.06	0.01
v/s Ratio Perm							
v/c Ratio	0.50	0.13		0.42		0.38	0.08
Uniform Delay, d1	11.9	3.0		6.3		9.3	8.9
Progression Factor	1.00	1.00		1.00		1.00	1.00
Incremental Delay, d2	10.5	0.0		0.2		0.9	0.1
Delay (s)	22.4	3.1		6.5		10.2	9.0
Level of Service	C	A		A		B	A
Approach Delay (s)		4.5		6.5		9.5	
Approach LOS		A		A		A	

Intersection Summary			
HCM Average Control Delay	6.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	24.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	26.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



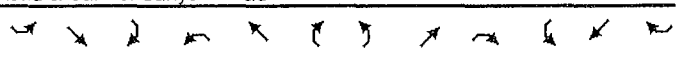
Movement	EBL	EBR	EBR2	WBL	WBT	WBR	NBL	NBT	NBR2	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	73	214	142	157	362	97	316	325	209	1070	186	200
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.88	1.00	1.00	1.00		1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.85	0.85	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	2787	1583	1770	1804		1770	3539	1583	3433	3539	1583
Flt Permitted	0.31	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	575	2787	1583	1770	1804		1770	3539	1583	3433	3539	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	81	238	158	174	402	108	351	361	232	1189	207	222
RTOR Reduction (vph)	0	0	130	0	11	0	0	0	193	0	0	161
Lane Group Flow (vph)	81	238	28	174	499	0	351	361	39	1189	207	61
Turn Type	custom	custom	custom	Prot			Prot		Prot	Prot		Prot
Protected Phases				3	8		5	2	2	1	6	6
Permitted Phases	4	4	4									
Actuated Green, G (s)	15.2	15.2	15.2	9.4	28.6		21.8	14.4	14.4	31.1	23.7	23.7
Effective Green, g (s)	15.2	15.2	15.2	9.4	28.6		21.8	14.4	14.4	31.1	23.7	23.7
Actuated g/C Ratio	0.18	0.18	0.18	0.11	0.33		0.25	0.17	0.17	0.36	0.28	0.28
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	102	492	279	193	599		448	592	265	1240	974	436
v/s Ratio Prot				0.10	c0.28		0.20	c0.10	0.02	c0.35	0.06	0.04
v/s Ratio Perm	0.14	0.09	0.02									
v/c Ratio	0.79	0.48	0.10	0.90	0.83		0.78	0.61	0.15	0.96	0.21	0.14
Uniform Delay, d1	34.0	31.9	29.7	37.9	26.6		30.0	33.2	30.6	26.9	24.0	23.5
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	33.3	0.8	0.2	38.4	9.7		8.7	1.8	0.3	16.5	0.1	0.1
Delay (s)	67.3	32.7	29.9	76.3	36.3		38.7	35.0	30.9	43.3	24.1	23.7
Level of Service	E	C	C	E	D		D	D	C	D	C	C
Approach Delay (s)					46.4			35.4			38.2	
Approach LOS					D			D			D	

Intersection Summary				
HCM Average Control Delay	38.9	HCM Level of Service	D	
HCM Volume to Capacity ratio	0.84			
Actuated Cycle Length (s)	86.1	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	81.8%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				



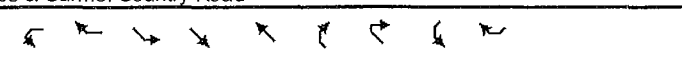
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	437	0	180	0	0	0	0	410	74	183	272	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95	1.00					0.95		0.97	0.95	
Frt	1.00	1.00	0.85					0.98		1.00	1.00	
Flt Protected	0.95	0.95	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	1681	1681	1583					3458		3433	3539	
Flt Permitted	0.95	0.95	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	1681	1681	1583					3458		3433	3539	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	486	0	200	0	0	0	0	456	82	203	302	0
RTOR Reduction (vph)	0	0	139	0	0	0	0	31	0	0	0	0
Lane Group Flow (vph)	243	243	61	0	0	0	0	507	0	203	302	0
Turn Type	Split		Prot							Prot		
Protected Phases	4	4	4					2		1	6	
Permitted Phases												
Actuated Green, G (s)	12.2	12.2	12.2					11.9		3.6	19.5	
Effective Green, g (s)	12.2	12.2	12.2					11.9		3.6	19.5	
Actuated g/C Ratio	0.31	0.31	0.31					0.30		0.09	0.49	
Clearance Time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	517	517	486					1037		311	1738	
v/s Ratio Prot	c0.14	0.14	0.04					c0.15		c0.06	0.09	
v/s Ratio Perm												
v/c Ratio	0.47	0.47	0.13					0.49		0.65	0.17	
Uniform Delay, d1	11.1	11.1	9.9					11.4		17.4	5.6	
Progression Factor	1.00	1.00	1.00					1.00		1.00	1.00	
Incremental Delay, d2	0.7	0.7	0.1					0.4		4.9	0.0	
Delay (s)	11.8	11.8	10.0					11.8		22.3	5.7	
Level of Service	B	B	B					B		C	A	
Approach Delay (s)		11.3			0.0			11.8			12.4	
Approach LOS		B			A			B			B	

Intersection Summary				
HCM Average Control Delay	11.8	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.50			
Actuated Cycle Length (s)	39.7	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	41.0%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	86	492	35	141	455	335	56	64	236	623	139	178
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		0.97	1.00	
Frt	1.00	0.99		1.00	0.94		1.00	0.88		1.00	0.92	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3504		1770	3314		1770	1643		3433	1706	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3504		1770	3314		1770	1643		3433	1706	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	96	547	39	157	506	372	62	71	262	692	154	198
RTOR Reduction (vph)	0	6	0	0	136	0	0	150	0	0	49	0
Lane Group Flow (vph)	96	580	0	157	742	0	62	183	0	692	303	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												
Actuated Green, G (s)	8.1	19.5		12.1	23.5		6.7	13.6		19.0	25.9	
Effective Green, g (s)	8.1	19.5		12.1	23.5		6.7	13.6		19.0	25.9	
Actuated g/C Ratio	0.10	0.24		0.15	0.29		0.08	0.17		0.24	0.32	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	179	852		267	971		148	279		813	551	
v/s Ratio Prot	0.05	0.17		c0.09	c0.22		0.04	c0.11		c0.20	0.18	
v/s Ratio Perm												
v/c Ratio	0.54	0.68		0.59	0.76		0.42	0.65		0.85	0.55	
Uniform Delay, d1	34.3	27.5		31.7	25.8		34.9	31.1		29.2	22.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	3.1	2.3		3.3	3.6		1.9	5.4		8.5	1.2	
Delay (s)	37.3	29.8		35.0	29.5		36.8	36.5		37.8	23.5	
Level of Service	D	C		D	C		D	D		D	C	
Approach Delay (s)		30.8			30.3			36.6			33.0	
Approach LOS		C			C			D			C	

Intersection Summary				
HCM Average Control Delay	32.1	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.76			
Actuated Cycle Length (s)	80.2	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	77.1%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	WBL	WBR	SEL	SET	NWT	NWR	NWR2	SWL	SWR
Lane Configurations									
Volume (vph)	0	0	754	580	742	0	306	133	225
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor			0.97	0.95	0.95		1.00	0.97	1.00
Frt			1.00	1.00	1.00		0.85	1.00	0.85
Flt Protected			0.95	1.00	1.00		1.00	0.95	1.00
Satd. Flow (prot)			3433	3539	3539		1583	3433	1583
Flt Permitted			0.95	1.00	1.00		1.00	0.95	1.00
Satd. Flow (perm)			3433	3539	3539		1583	3433	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	838	644	824	0	340	148	250
RTOR Reduction (vph)	0	0	0	0	0	0	230	0	213
Lane Group Flow (vph)	0	0	838	644	824	0	110	148	37
Turn Type			Prot				Perm		Perm
Protected Phases			5	2	6			4	
Permitted Phases							6		4
Actuated Green, G (s)			17.2	39.0	17.8		17.8	8.1	8.1
Effective Green, g (s)			17.2	39.0	17.8		17.8	8.1	8.1
Actuated g/C Ratio			0.31	0.71	0.32		0.32	0.15	0.15
Clearance Time (s)			4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)			3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)			1072	2505	1143		511	505	233
v/s Ratio Prot			c0.24	0.18	c0.23			c0.04	
v/s Ratio Perm							0.07		0.02
v/c Ratio			0.78	0.26	0.72		0.21	0.29	0.16
Uniform Delay, d1			17.2	2.9	16.5		13.6	20.9	20.5
Progression Factor			1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2			3.8	0.1	2.3		0.2	0.3	0.3
Delay (s)			21.0	2.9	18.7		13.8	21.3	20.8
Level of Service			C	A	B		B	C	C
Approach Delay (s)	0.0			13.2	17.3			21.0	
Approach LOS	A			B	B			C	

Intersection Summary				
HCM Average Control Delay	15.8	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.66			
Actuated Cycle Length (s)	55.1	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	55.8%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL2	EBL	EBR	SEL	SET	SER	NWL	NWT	NWR	SWL	SWR
Lane Configurations											
Volume (vph)	300	0	161	340	370	0	0	723	214	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		
Lane Util. Factor	0.95	0.95	1.00	0.97	0.95			0.95	1.00		
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		
Flt Protected	0.95	0.95	1.00	0.95	1.00			1.00	1.00		
Satd. Flow (prot)	1681	1681	1583	3433	3539			3539	1583		
Flt Permitted	0.95	0.95	1.00	0.95	1.00			1.00	1.00		
Satd. Flow (perm)	1681	1681	1583	3433	3539			3539	1583		
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	333	0	179	378	411	0	0	803	238	0	0
RTOR Reduction (vph)	0	0	141	0	0	0	0	0	156	0	0
Lane Group Flow (vph)	166	167	38	378	411	0	0	803	82	0	0
Turn Type	Split		Prot	Prot					Prot		
Protected Phases	4	4	4	1	6			2	2		
Permitted Phases											
Actuated Green, G (s)	10.1	10.1	10.1	8.9	29.3			16.4	16.4		
Effective Green, g (s)	10.1	10.1	10.1	8.9	29.3			16.4	16.4		
Actuated g/C Ratio	0.21	0.21	0.21	0.19	0.62			0.35	0.35		
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0		
Lane Grp Cap (vph)	358	358	337	645	2188			1224	548		
v/s Ratio Prot	0.10	c0.10	0.02	c0.11	0.12			c0.23	0.05		
v/s Ratio Perm											
v/c Ratio	0.46	0.47	0.11	0.59	0.19			0.66	0.15		
Uniform Delay, d1	16.3	16.3	15.0	17.6	3.9			13.1	10.7		
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00	1.00		
Incremental Delay, d2	1.0	1.0	0.1	1.4	0.0			1.3	0.1		
Delay (s)	17.2	17.3	15.2	18.9	4.0			14.4	10.8		
Level of Service	B	B	B	B	A			B	B		
Approach Delay (s)		16.5			11.1			13.6		0.0	
Approach LOS		B			B			B		A	

Intersection Summary				
HCM Average Control Delay	13.4	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.58			
Actuated Cycle Length (s)	47.4	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	48.0%	ICU Level of Service	A	
Analysis Period (min)	15			

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	10	10	10	200	2	25	3	262	100	15	929	3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	11	11	11	222	2	28	3	291	111	17	1032	3

Direction, Lane #	EB 1	WB 1	NE 1	NE 2	SW 1	SW 2
Volume Total (vph)	33	252	149	257	533	519
Volume Left (vph)	11	222	3	0	17	0
Volume Right (vph)	11	28	0	111	0	3
Hadj (s)	-0.10	0.14	0.05	-0.27	0.05	0.03
Departure Headway (s)	7.4	6.8	7.1	6.7	6.3	6.2
Degree Utilization, x	0.07	0.48	0.29	0.48	0.93	0.90
Capacity (veh/h)	449	514	497	521	533	565
Control Delay (s)	10.9	15.8	11.7	14.6	45.4	40.8
Approach Delay (s)	10.9	15.8	13.6		43.1	
Approach LOS	B	C	B		E	

Intersection Summary				
Delay	31.7			
HCM Level of Service	D			
Intersection Capacity Utilization	62.5%	ICU Level of Service	B	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	6	397	494	166	363	3	532	2	402	0	2	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.95	1.00		1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1861			1774	1583		1779	
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.95	1.00		1.00	
Satd. Flow (perm)	1770	1863	1583	1770	1861			1774	1583		1779	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	7	441	549	184	403	3	591	2	447	0	2	1
RTOR Reduction (vph)	0	0	285	0	0	0	0	0	278	0	1	0
Lane Group Flow (vph)	7	441	264	184	406	0	0	593	169	0	2	0
Turn Type	Prot		Prot	Prot			Split		Prot	Split		
Protected Phases	7	4	4	3	8		2	2	2	6	6	
Permitted Phases												
Actuated Green, G (s)	0.8	26.8	26.8	10.9	36.9			33.2	33.2		1.1	
Effective Green, g (s)	0.8	26.8	26.8	10.9	36.9			33.2	33.2		1.1	
Actuated g/C Ratio	0.01	0.30	0.30	0.12	0.42			0.38	0.38		0.01	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	16	567	482	219	780			669	597		22	
v/s Ratio Prot	0.00	c0.24	0.17	c0.10	0.22			c0.33	0.11		c0.00	
v/s Ratio Perm												
v/c Ratio	0.44	0.78	0.55	0.84	0.52			0.89	0.28		0.09	
Uniform Delay, d1	43.4	27.9	25.5	37.7	19.0			25.6	19.1		43.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	18.0	6.6	1.3	24.1	0.6			13.4	0.3		1.8	
Delay (s)	61.3	34.5	26.8	61.8	19.6			39.1	19.4		44.8	
Level of Service	E	C	C	E	B			D	B		D	
Approach Delay (s)		30.5			32.8			30.6			44.8	
Approach LOS		C			C			C			D	

Intersection Summary				
HCM Average Control Delay	31.1	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.83			
Actuated Cycle Length (s)	88.0	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	76.3%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

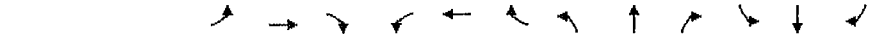
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Volume (vph)	205	256	0	551	364	332	285
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00		1.00	1.00	1.00	0.95
Frt	1.00	0.85		1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00		1.00	1.00	0.95	1.00
Satd. Flow (prot)	3433	1583		1863	1583	1770	3539
Flt Permitted	0.95	1.00		1.00	1.00	0.95	1.00
Satd. Flow (perm)	3433	1583		1863	1583	1770	3539
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	228	284	0	612	404	369	317
RTOR Reduction (vph)	0	236	0	0	244	0	0
Lane Group Flow (vph)	228	48	0	612	160	369	317
Turn Type		Perm	Prot		Perm	Prot	
Protected Phases	1		3	8		7	
Permitted Phases		1			8		6
Actuated Green, G (s)	11.8	11.8		27.4	27.4	18.2	11.8
Effective Green, g (s)	11.8	11.8		27.4	27.4	18.2	11.8
Actuated g/C Ratio	0.17	0.17		0.39	0.39	0.26	0.17
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	584	269		736	625	464	602
v/s Ratio Prot	0.07			c0.33		c0.21	
v/s Ratio Perm		0.03			0.10		c0.09
v/c Ratio	0.39	0.18		0.83	0.26	0.80	0.53
Uniform Delay, d1	25.6	24.7		18.9	14.1	23.9	26.3
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.3		8.0	0.2	9.1	0.8
Delay (s)	26.0	25.0		26.9	14.3	33.0	27.1
Level of Service	C	C		C	B	C	C
Approach Delay (s)	25.4			21.9			30.3
Approach LOS	C			C			C

Intersection Summary			
HCM Average Control Delay	25.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	69.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Volume (vph)	63	6	0	876	108	8	488
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0		4.0	4.0
Lane Util. Factor	0.97			0.95		1.00	0.95
Frt	0.99			0.98		1.00	1.00
Flt Protected	0.96			1.00		0.95	1.00
Satd. Flow (prot)	3409			3481		1770	3539
Flt Permitted	0.96			1.00		0.95	1.00
Satd. Flow (perm)	3409			3481		1770	3539
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	70	7	0	973	120	9	542
RTOR Reduction (vph)	7	0	0	14	0	0	0
Lane Group Flow (vph)	70	0	0	1079	0	9	542
Turn Type			Prot			Prot	
Protected Phases	8		5	2		1	6
Permitted Phases							
Actuated Green, G (s)	1.9			16.6		0.6	21.2
Effective Green, g (s)	1.9			16.6		0.6	21.2
Actuated g/C Ratio	0.06			0.53		0.02	0.68
Clearance Time (s)	4.0			4.0		4.0	4.0
Vehicle Extension (s)	3.0			3.0		3.0	3.0
Lane Grp Cap (vph)	208			1858		34	2412
v/s Ratio Prot	c0.02			c0.31		0.01	c0.15
v/s Ratio Perm							
v/c Ratio	0.34			0.58		0.26	0.22
Uniform Delay, d1	14.0			4.9		15.0	1.9
Progression Factor	1.00			1.00		1.00	1.00
Incremental Delay, d2	1.0			0.5		4.1	0.0
Delay (s)	15.0			5.4		19.2	1.9
Level of Service	B			A		B	A
Approach Delay (s)	15.0			5.4			2.2
Approach LOS	B			A			A

Intersection Summary			
HCM Average Control Delay	4.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	31.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	37.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	22	21	14	18	20	150	25	794	58	86	434	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.94		1.00	0.87		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1748		1770	1616		1770	3503		1770	3508	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1748		1770	1616		1770	3503		1770	3508	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	24	23	16	20	22	167	28	882	64	96	482	30
RTOR Reduction (vph)	0	14	0	0	148	0	0	7	0	0	5	0
Lane Group Flow (vph)	24	25	0	20	41	0	28	939	0	96	507	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	0.6	5.1		0.6	5.1		0.6	20.4		3.5	23.3	
Effective Green, g (s)	0.6	5.1		0.6	5.1		0.6	20.4		3.5	23.3	
Actuated g/C Ratio	0.01	0.11		0.01	0.11		0.01	0.45		0.08	0.51	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	23	196		23	181		23	1567		136	1792	
v/s Ratio Prot	c0.01	0.01		0.01	c0.03		0.02	c0.27		c0.05	c0.14	
v/s Ratio Perm												
v/c Ratio	1.04	0.13		0.87	0.22		1.22	0.60		0.71	0.28	
Uniform Delay, d1	22.5	18.2		22.5	18.4		22.5	9.5		20.5	6.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	201.7	0.3		127.6	0.6		261.7	0.6		15.4	0.1	
Delay (s)	224.2	18.5		150.0	19.1		284.2	10.1		35.9	6.5	
Level of Service	F	B		F	B		F	B		D	A	
Approach Delay (s)		96.9			31.6			18.0			11.1	
Approach LOS		F			C			B			B	

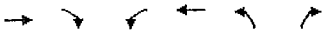
Intersection Summary			
HCM Average Control Delay	20.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	45.6	Sum of lost time (s)	20.0
Intersection Capacity Utilization	55.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	7	41	32	44	29	19	47	937	124	22	459	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.94		1.00	0.98		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1752		1770	3477		1770	3528	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1583	1770	1752		1770	3477		1770	3528	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	8	46	36	49	32	21	52	1041	138	24	510	11
RTOR Reduction (vph)	0	0	33	0	19	0	0	12	0	0	2	0
Lane Group Flow (vph)	8	46	3	49	34	0	52	1167	0	24	519	0
Turn Type	Prot		Prot	Prot			Prot			Prot		
Protected Phases	7	4	4	3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	0.6	4.1	4.1	1.3	4.8		1.7	22.5		0.6	21.4	
Effective Green, g (s)	0.6	4.1	4.1	1.3	4.8		1.7	22.5		0.6	21.4	
Actuated g/C Ratio	0.01	0.09	0.09	0.03	0.11		0.04	0.51		0.01	0.48	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	24	172	146	52	189		68	1758		24	1697	
v/s Ratio Prot	0.00	c0.02	0.00	c0.03	0.02		c0.03	c0.34		0.01	0.15	
v/s Ratio Perm												
v/c Ratio	0.33	0.27	0.02	0.94	0.18		0.76	0.66		1.00	0.31	
Uniform Delay, d1	21.8	18.8	18.4	21.6	18.1		21.2	8.2		22.0	7.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	8.0	0.8	0.1	102.9	0.5		39.2	1.0		183.7	0.1	
Delay (s)	29.8	19.6	18.4	124.5	18.5		60.4	9.1		205.7	7.1	
Level of Service	C	B	B	F	B		E	A		F	A	
Approach Delay (s)		20.1			69.4			11.3			15.9	
Approach LOS		C			E			B			B	

Intersection Summary				
HCM Average Control Delay	16.0	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.57			
Actuated Cycle Length (s)	44.5	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	52.3%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	124	830	16	140	904	208	40	31	53	385	35	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.95			1.00	1.00	0.95	0.95	
Frt	1.00	1.00		1.00	0.97			1.00	0.85	1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00	0.95	0.98	
Satd. Flow (prot)	1770	5071		1770	3440			1812	1583	1681	1611	
Flt Permitted	0.95	1.00		0.95	1.00			0.97	1.00	0.95	0.98	
Satd. Flow (perm)	1770	5071		1770	3440			1812	1583	1681	1611	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	138	922	18	156	1004	231	44	34	59	428	39	144
RTOR Reduction (vph)	0	2	0	0	21	0	0	0	54	0	36	0
Lane Group Flow (vph)	138	938	0	156	1214	0	0	78	5	312	263	0
Turn Type	Prot			Prot			Split		Perm	Split		
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases									2			
Actuated Green, G (s)	8.0	27.4		11.8	31.2			7.4	7.4	17.4	17.4	
Effective Green, g (s)	8.0	27.4		11.8	31.2			7.4	7.4	17.4	17.4	
Actuated g/C Ratio	0.10	0.34		0.15	0.39			0.09	0.09	0.22	0.22	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	177	1737		261	1342			168	146	366	350	
v/s Ratio Prot	c0.08	0.18		0.09	c0.35			c0.04		c0.19	0.16	
v/s Ratio Perm									0.00			
v/c Ratio	0.78	0.54		0.60	0.90			0.46	0.04	0.85	0.75	
Uniform Delay, d1	35.1	21.2		31.9	23.0			34.4	33.1	30.1	29.3	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2	19.2	0.3		3.7	8.9			2.0	0.1	17.2	8.8	
Delay (s)	54.4	21.6		35.5	31.9			36.4	33.2	47.2	38.1	
Level of Service	D	C		D	C			D	C	D	D	
Approach Delay (s)		25.8			32.3			35.0			42.7	
Approach LOS		C			C			D			D	

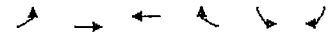
Intersection Summary				
HCM Average Control Delay	32.2	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.82			
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	71.2%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑			↑↑		↱
Volume (veh/h)	1223	62	0	1506	0	89
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	1359	69	0	1673	0	99
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	575			607		
pX, platoon unblocked			0.87		0.75	0.87
vC, conflicting volume			1428		2230	487
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			979		962	0
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	90
cM capacity (veh/h)			611		191	946

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1
Volume Total	544	544	341	837	837	99
Volume Left	0	0	0	0	0	0
Volume Right	0	0	69	0	0	99
cSH	1700	1700	1700	1700	1700	946
Volume to Capacity	0.32	0.32	0.20	0.49	0.49	0.10
Queue Length 95th (ft)	0	0	0	0	0	9
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	9.2
Lane LOS						A
Approach Delay (s)	0.0			0.0		9.2
Approach LOS						A

Intersection Summary				
Average Delay	0.3			
Intersection Capacity Utilization	45.0%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↰↑↑	↱
Volume (vph)	0	929	1254	0	889	290
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		0.97	0.91
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3539	3539		3431	1441
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3539	3539		3431	1441
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	1032	1393	0	988	322
RTOR Reduction (vph)	0	0	0	0	2	15
Lane Group Flow (vph)	0	1032	1393	0	1018	275
Turn Type						Prot
Protected Phases		4	8		6	6
Permitted Phases						
Actuated Green, G (s)		57.9	57.9		54.1	54.1
Effective Green, g (s)		57.9	57.9		54.1	54.1
Actuated g/C Ratio		0.48	0.48		0.45	0.45
Clearance Time (s)		4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1708	1708		1547	650
v/s Ratio Prot		0.29	c0.39		c0.30	0.19
v/s Ratio Perm						
v/c Ratio		0.60	0.82		0.66	0.42
Uniform Delay, d1		22.7	26.5		25.7	22.4
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		0.6	3.1		2.2	2.0
Delay (s)		23.3	29.6		27.9	24.4
Level of Service		C	C		C	C
Approach Delay (s)		23.3	29.6		27.1	
Approach LOS		C	C		C	

Intersection Summary			
HCM Average Control Delay	27.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	235	1557	0	0	1321	887	615	10	830	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	0.97	0.95			0.91	1.00	0.95	0.91	0.95			
Frt	1.00	1.00			1.00	0.85	1.00	0.89	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99	1.00			
Satd. Flow (prot)	3433	3539			5085	1583	1681	1485	1504			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99	1.00			
Satd. Flow (perm)	3433	3539			5085	1583	1681	1485	1504			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	261	1730	0	0	1468	986	683	11	922	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	482	0	10	10	0	0	0
Lane Group Flow (vph)	261	1730	0	0	1468	504	567	523	506	0	0	0
Turn Type	Prot					Prot	Split		Prot			
Protected Phases	7	4			8	8	2	2	2			
Permitted Phases												
Actuated Green, G (s)	10.0	67.0			53.0	53.0	45.0	45.0	45.0			
Effective Green, g (s)	10.0	67.0			53.0	53.0	45.0	45.0	45.0			
Actuated g/C Ratio	0.08	0.56			0.44	0.44	0.38	0.38	0.38			
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0			
Lane Grp Cap (vph)	286	1976			2246	699	630	557	564			
v/s Ratio Prot	0.08	c0.49			0.29	0.32	0.34	c0.35	0.34			
v/s Ratio Perm												
v/c Ratio	0.91	0.88			0.65	0.72	0.90	0.94	0.90			
Uniform Delay, d1	54.6	22.9			26.3	27.4	35.4	36.2	35.3			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	31.3	4.7			0.7	3.7	18.3	25.7	19.6			
Delay (s)	85.9	27.6			27.0	31.1	53.7	61.9	54.9			
Level of Service	F	C			C	C	D	E	D			
Approach Delay (s)		35.2			28.6			56.8			0.0	
Approach LOS		D			C			E			A	

Intersection Summary				
HCM Average Control Delay	38.3	HCM Level of Service	D	
HCM Volume to Capacity ratio	0.90			
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	97.4%	ICU Level of Service	F	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	242	2159	251	45	1535	58	618	65	147	40	29	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		0.97	0.95		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.90		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5058		3433	3171		1770	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5058		3433	3171		1770	1863	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	269	2399	279	50	1706	64	687	72	163	44	32	89
RTOR Reduction (vph)	0	0	92	0	3	0	0	105	0	0	0	83
Lane Group Flow (vph)	269	2399	187	50	1767	0	687	130	0	44	32	6
Turn Type	Prot		Prot	Prot			Prot			Prot		Prot
Protected Phases	7	4	4	3	8		5	2		1	6	6
Permitted Phases												
Actuated Green, G (s)	17.4	52.1	52.1	3.5	38.2		22.1	24.9		4.1	6.9	6.9
Effective Green, g (s)	17.4	52.1	52.1	3.5	38.2		22.1	24.9		4.1	6.9	6.9
Actuated g/C Ratio	0.17	0.52	0.52	0.03	0.38		0.22	0.25		0.04	0.07	0.07
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	306	2633	820	62	1921		754	785		72	128	109
v/s Ratio Prot	c0.15	c0.47	0.12	0.03	0.35		c0.20	0.04		0.02	c0.02	0.00
v/s Ratio Perm												
v/c Ratio	0.88	0.91	0.23	0.81	0.92		0.91	0.17		0.61	0.25	0.06
Uniform Delay, d1	40.6	22.1	13.3	48.2	29.7		36.3	29.7		47.5	44.4	43.8
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	23.6	5.3	0.1	51.6	7.6		15.2	0.1		14.4	1.0	0.2
Delay (s)	64.2	27.4	13.4	99.9	37.3		53.5	29.8		61.8	45.4	44.0
Level of Service	E	C	B	F	D		D	C		E	D	D
Approach Delay (s)		29.5			39.1			47.4			49.0	
Approach LOS		C			D			D			D	

Intersection Summary				
HCM Average Control Delay	35.8	HCM Level of Service	D	
HCM Volume to Capacity ratio	0.84			
Actuated Cycle Length (s)	100.6	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	79.3%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↱	↰	↑↑↑	↰↰	↱
Volume (vph)	2234	112	67	1390	253	152
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	5085	1583	1770	5085	3433	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	5085	1583	1770	5085	3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2428	122	73	1511	275	165
RTOR Reduction (vph)	0	56	0	0	0	112
Lane Group Flow (vph)	2428	66	73	1511	275	53
Turn Type		Perm	Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	28.4	28.4	2.2	34.6	9.6	9.6
Effective Green, g (s)	28.4	28.4	2.2	34.6	9.6	9.6
Actuated g/C Ratio	0.54	0.54	0.04	0.66	0.18	0.18
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2767	861	75	3371	631	291
v/s Ratio Prot	c0.48		c0.04	0.30	c0.08	
v/s Ratio Perm		0.04				0.03
v/c Ratio	0.88	0.08	0.97	0.45	0.44	0.18
Uniform Delay, d1	10.4	5.7	25.0	4.2	18.9	18.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.5	0.0	94.2	0.1	0.5	0.3
Delay (s)	13.9	5.7	119.2	4.3	19.4	18.3
Level of Service	B	A	F	A	B	B
Approach Delay (s)	13.5			9.6	19.0	
Approach LOS	B			A	B	

Intersection Summary				
HCM Average Control Delay	12.7	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.78			
Actuated Cycle Length (s)	52.2	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	64.1%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↱	↰↰	↑↑↑	↰	↱
Volume (vph)	2296	90	45	1255	202	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	0.97	0.91	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	5085	1583	3433	5085	1770	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	5085	1583	3433	5085	1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2496	98	49	1364	220	110
RTOR Reduction (vph)	0	43	0	0	0	88
Lane Group Flow (vph)	2496	55	49	1364	220	22
Turn Type		Perm	Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	33.5	33.5	2.2	39.7	12.0	12.0
Effective Green, g (s)	33.5	33.5	2.2	39.7	12.0	12.0
Actuated g/C Ratio	0.56	0.56	0.04	0.66	0.20	0.20
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2853	888	127	3381	356	318
v/s Ratio Prot	c0.49		0.01	c0.27	c0.12	
v/s Ratio Perm		0.03				0.01
v/c Ratio	0.87	0.06	0.39	0.40	0.62	0.07
Uniform Delay, d1	11.3	6.0	28.1	4.6	21.8	19.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.3	0.0	1.9	0.1	3.2	0.1
Delay (s)	14.6	6.0	30.0	4.7	24.9	19.4
Level of Service	B	A	C	A	C	B
Approach Delay (s)	14.3			5.5	23.1	
Approach LOS	B			A	C	

Intersection Summary				
HCM Average Control Delay	12.1	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.80			
Actuated Cycle Length (s)	59.7	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	62.2%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	469	1574	344	156	830	176	266	424	309	147	159	204
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.91		0.97	0.91		0.97	0.91	1.00	0.97	0.91	
Frt	1.00	0.97		1.00	0.97		1.00	1.00	0.85	1.00	0.92	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	4949		3433	4952		3433	5085	1583	3433	4657	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3433	4949		3433	4952		3433	5085	1583	3433	4657	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	521	1749	382	173	922	196	296	471	343	163	177	227
RTOR Reduction (vph)	0	37	0	0	35	0	0	0	115	0	188	0
Lane Group Flow (vph)	521	2094	0	173	1083	0	296	471	228	163	216	0
Turn Type	Prot			Prot			Prot		Prot	Prot		
Protected Phases	7	4		3	8		5	2	2	1	6	
Permitted Phases												
Actuated Green, G (s)	16.1	40.1		6.0	30.0		9.1	17.7	17.7	6.0	14.6	
Effective Green, g (s)	16.1	40.1		6.0	30.0		9.1	17.7	17.7	6.0	14.6	
Actuated g/C Ratio	0.19	0.47		0.07	0.35		0.11	0.21	0.21	0.07	0.17	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	644	2313		240	1731		364	1049	327	240	792	
v/s Ratio Prot	c0.15	c0.42		0.05	0.22		c0.09	0.09	c0.14	0.05	0.05	
v/s Ratio Perm												
v/c Ratio	0.81	0.91		0.72	0.63		0.81	0.45	0.70	0.68	0.27	
Uniform Delay, d1	33.4	21.1		39.1	23.2		37.5	29.8	31.6	39.0	31.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	7.4	5.5		10.2	0.7		13.0	0.3	6.3	7.4	0.2	
Delay (s)	40.8	26.6		49.3	23.9		50.5	30.1	37.9	46.4	31.2	
Level of Service	D	C		D	C		D	C	D	D	C	
Approach Delay (s)		29.4			27.3			37.9			35.5	
Approach LOS		C			C			D			D	

Intersection Summary				
HCM Average Control Delay	31.2	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.83			
Actuated Cycle Length (s)	85.8	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	71.4%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

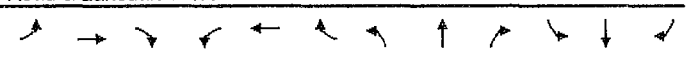
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	123	1201	546	80	587	72	359	167	145	78	124	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	0.97	0.91		0.97	0.91		0.97	0.91		1.00	0.95	
Frt	1.00	0.95		1.00	0.98		1.00	0.93		1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	4847		3433	5002		3433	4731		1770	3283	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	4847		3433	5002		3433	4731		1770	3283	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	137	1334	607	89	652	80	399	186	161	87	138	129
RTOR Reduction (vph)	0	75	0	0	15	0	0	129	0	0	114	0
Lane Group Flow (vph)	137	1866	0	89	717	0	399	218	0	87	153	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	8.0	42.4		3.8	38.2		14.3	17.3		7.3	10.3	
Effective Green, g (s)	8.0	42.4		3.8	38.2		14.3	17.3		7.3	10.3	
Actuated g/C Ratio	0.09	0.49		0.04	0.44		0.16	0.20		0.08	0.12	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	316	2368		150	2201		566	943		149	390	
v/s Ratio Prot	c0.04	c0.38		0.03	0.14		c0.12	0.05		0.05	c0.05	
v/s Ratio Perm												
v/c Ratio	0.43	0.79		0.59	0.33		0.70	0.23		0.58	0.39	
Uniform Delay, d1	37.3	18.5		40.7	15.9		34.3	29.2		38.3	35.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.0	1.8		6.2	0.1		4.0	0.1		5.7	0.7	
Delay (s)	38.2	20.3		46.9	16.0		38.2	29.3		44.0	36.0	
Level of Service	D	C		D	B		D	C		D	D	
Approach Delay (s)		21.5			19.3			34.1			38.0	
Approach LOS		C			B			C			D	

Intersection Summary				
HCM Average Control Delay	24.8	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.70			
Actuated Cycle Length (s)	86.8	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	69.5%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	48	1237	145	8	641	22	54	14	31	27	8	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	1.00		1.00	0.90		1.00	0.88	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5005		1770	5060		1770	1673		1770	1643	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	5005		1770	5060		1770	1673		1770	1643	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	53	1374	161	9	712	24	60	16	34	30	9	33
RTOR Reduction (vph)	0	17	0	0	4	0	0	32	0	0	31	0
Lane Group Flow (vph)	53	1518	0	9	732	0	60	18	0	30	11	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	1.6	22.2		0.6	21.2		1.2	3.1		0.6	2.5	
Effective Green, g (s)	1.6	22.2		0.6	21.2		1.2	3.1		0.6	2.5	
Actuated g/C Ratio	0.04	0.52		0.01	0.50		0.03	0.07		0.01	0.06	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	67	2614		25	2524		50	122		25	97	
v/s Ratio Prot	c0.03	c0.30		0.01	0.14		c0.03	c0.01		0.02	0.01	
v/s Ratio Perm												
v/c Ratio	0.79	0.58		0.36	0.29		1.20	0.15		1.20	0.11	
Uniform Delay, d1	20.3	7.0		20.8	6.2		20.7	18.5		21.0	18.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	45.6	0.3		8.7	0.1		191.5	0.6		247.2	0.5	
Delay (s)	65.9	7.3		29.4	6.3		212.2	19.0		268.2	19.5	
Level of Service	E	A		C	A		F	B		F	B	
Approach Delay (s)		9.2			6.6			124.4			123.1	
Approach LOS		A			A			F			F	

Intersection Summary				
HCM Average Control Delay	16.8	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.47			
Actuated Cycle Length (s)	42.5	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	50.1%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	277	952	63	21	461	24	39	45	34	23	32	177
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.94		1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5038		1770	5047		1770	1742		1770	1627	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	5038		1770	5047		1770	1742		1770	1627	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	308	1058	70	23	512	27	43	50	38	26	36	197
RTOR Reduction (vph)	0	9	0	0	9	0	0	31	0	0	165	0
Lane Group Flow (vph)	308	1119	0	23	530	0	43	57	0	26	68	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	11.9	25.9		0.7	14.7		1.5	9.2		0.7	8.4	
Effective Green, g (s)	11.9	25.9		0.7	14.7		1.5	9.2		0.7	8.4	
Actuated g/C Ratio	0.23	0.49		0.01	0.28		0.03	0.18		0.01	0.16	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	401	2485		24	1413		51	305		24	260	
v/s Ratio Prot	c0.17	c0.22		0.01	0.11		c0.02	0.03		0.01	c0.04	
v/s Ratio Perm												
v/c Ratio	0.77	0.45		0.96	0.38		0.84	0.19		1.08	0.26	
Uniform Delay, d1	19.0	8.7		25.9	15.2		25.4	18.5		25.9	19.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	8.6	0.1		163.4	0.2		70.6	0.3		210.9	0.5	
Delay (s)	27.6	8.8		189.3	15.4		96.0	18.8		236.8	19.9	
Level of Service	C	A		F	B		F	B		F	B	
Approach Delay (s)		12.8			22.5			44.1			41.6	
Approach LOS		B			C			D			D	

Intersection Summary				
HCM Average Control Delay	19.9	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.50			
Actuated Cycle Length (s)	52.5	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	54.1%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	817	175	89	412	110	248
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.91		1.00	0.91	0.97	1.00
Frt	0.97		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	4951		1770	5085	3433	1583
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	4951		1770	5085	3433	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	908	194	99	458	122	276
RTOR Reduction (vph)	55	0	0	0	0	232
Lane Group Flow (vph)	1047	0	99	458	122	44
Turn Type			Prot			Prot
Protected Phases	4		3	8	2	2
Permitted Phases						
Actuated Green, G (s)	16.3		2.4	22.7	5.6	5.6
Effective Green, g (s)	16.3		2.4	22.7	5.6	5.6
Actuated g/C Ratio	0.45		0.07	0.63	0.15	0.15
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2223		117	3180	530	244
v/s Ratio Prot	c0.21		c0.06	0.09	c0.04	0.03
v/s Ratio Perm						
v/c Ratio	0.47		0.85	0.14	0.23	0.18
Uniform Delay, d1	7.0		16.8	2.8	13.5	13.4
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2		39.9	0.0	0.2	0.4
Delay (s)	7.1		56.7	2.8	13.7	13.7
Level of Service	A		E	A	B	B
Approach Delay (s)	7.1			12.4	13.7	
Approach LOS	A			B	B	

Intersection Summary			
HCM Average Control Delay	9.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	36.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	41.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	101	30	30	188	13	248	54	628	163	286	363	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.95	0.95			1.00	1.00	0.97	0.91		0.97	0.91	1.00
Frt	1.00	0.94			1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	0.99			0.96	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1649			1779	1583	3433	4928		3433	5085	1583
Flt Permitted	0.25	0.35			0.96	1.00	0.51	1.00		0.95	1.00	1.00
Satd. Flow (perm)	437	591			1779	1583	1829	4928		3433	5085	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	112	33	33	209	14	276	60	698	181	318	403	24
RTOR Reduction (vph)	0	26	0	0	0	219	0	57	0	0	0	14
Lane Group Flow (vph)	90	62	0	0	223	57	60	822	0	318	403	10
Turn Type	Perm			Split		Perm	Perm			Prot		Perm
Protected Phases		2		6	6			8		7	4	
Permitted Phases	2					6	8					4
Actuated Green, G (s)	16.2	16.2			14.7	14.7	15.9	15.9		8.5	28.4	28.4
Effective Green, g (s)	16.2	16.2			14.7	14.7	15.9	15.9		8.5	28.4	28.4
Actuated g/C Ratio	0.23	0.23			0.21	0.21	0.22	0.22		0.12	0.40	0.40
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	99	134			367	326	408	1099		409	2025	631
v/s Ratio Prot					c0.13			c0.17		c0.09	0.08	
v/s Ratio Perm	c0.21	0.11				0.04	0.03					0.01
v/c Ratio	0.91	0.47			0.61	0.17	0.15	0.75		0.78	0.20	0.02
Uniform Delay, d1	26.8	23.8			25.7	23.3	22.3	25.8		30.5	14.0	13.0
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	61.2	2.6			2.8	0.3	0.2	2.8		9.0	0.0	0.0
Delay (s)	88.0	26.4			28.5	23.6	22.4	28.7		39.5	14.1	13.0
Level of Service	F	C			C	C	C	C		D	B	B
Approach Delay (s)		57.5			25.8			28.3			24.9	
Approach LOS		E			C			C			C	

Intersection Summary					
HCM Average Control Delay	28.9	HCM Level of Service		C	
HCM Volume to Capacity ratio	0.76				
Actuated Cycle Length (s)	71.3	Sum of lost time (s)		16.0	
Intersection Capacity Utilization	51.7%	ICU Level of Service		A	
Analysis Period (min)	15				
c Critical Lane Group					

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	119	105	173	14	54	115	113	488	10	182	574	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.90		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1673		1770	3529		1770	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	1863	1583	1770	1673		1770	3529		1770	3539	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	132	117	192	16	60	128	126	542	11	202	638	98
RTOR Reduction (vph)	0	0	135	0	105	0	0	1	0	0	0	67
Lane Group Flow (vph)	132	117	57	16	83	0	126	552	0	202	638	31
Turn Type	Prot		Prot	Prot			Prot			Prot		Prot
Protected Phases	7	4	4	3	8		5	2		1	6	6
Permitted Phases												
Actuated Green, G (s)	7.9	17.9	17.9	0.7	10.7		6.2	15.7		9.6	19.1	19.1
Effective Green, g (s)	7.9	17.9	17.9	0.7	10.7		6.2	15.7		9.6	19.1	19.1
Actuated g/C Ratio	0.13	0.30	0.30	0.01	0.18		0.10	0.26		0.16	0.32	0.32
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	233	557	473	21	299		183	925		284	1128	505
v/s Ratio Prot	c0.07	0.06	0.04	0.01	c0.05		0.07	0.16		c0.11	c0.18	0.02
v/s Ratio Perm												
v/c Ratio	0.57	0.21	0.12	0.76	0.28		0.69	0.60		0.71	0.57	0.06
Uniform Delay, d1	24.4	15.7	15.3	29.5	21.3		25.9	19.3		23.8	17.0	14.2
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	3.1	0.2	0.1	92.1	0.5		10.3	1.0		8.1	0.7	0.1
Delay (s)	27.5	15.9	15.4	121.6	21.8		36.2	20.4		32.0	17.6	14.2
Level of Service	C	B	B	F	C		D	C		C	B	B
Approach Delay (s)		19.2			29.6			23.3			20.3	
Approach LOS		B			C			C			C	

Intersection Summary				
HCM Average Control Delay	21.8	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.54			
Actuated Cycle Length (s)	59.9	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	53.7%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	11	6	10	140	0	96	7	727	200	134	501	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0		4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00		1.00	1.00	0.91		1.00	0.91	
Frt	1.00	0.91		1.00		0.85	1.00	0.97		1.00	1.00	
Flt Protected	0.95	1.00		0.95		1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1692		1770		1583	1770	4921		1770	5083	
Flt Permitted	0.95	1.00		0.95		1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1692		1770		1583	1770	4921		1770	5083	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	12	7	11	156	0	107	8	808	222	149	557	2
RTOR Reduction (vph)	0	11	0	0	0	93	0	62	0	0	0	0
Lane Group Flow (vph)	12	7	0	156	0	14	8	968	0	149	559	0
Turn Type	Prot			Prot		Prot	Prot			Prot		
Protected Phases	1	6		5	2	2	7	4		3	8	
Permitted Phases												
Actuated Green, G (s)	0.7	1.1		5.9		6.3	0.7	19.3		7.4	26.0	
Effective Green, g (s)	0.7	1.1		5.9		6.3	0.7	19.3		7.4	26.0	
Actuated g/C Ratio	0.01	0.02		0.12		0.13	0.01	0.39		0.15	0.52	
Clearance Time (s)	4.0	4.0		4.0		4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0		3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	25	37		210		201	25	1911		264	2659	
v/s Ratio Prot	0.01	0.00		c0.09		c0.01	0.00	c0.20		c0.08	0.11	
v/s Ratio Perm												
v/c Ratio	0.48	0.20		0.74		0.07	0.32	0.51		0.56	0.21	
Uniform Delay, d1	24.3	23.9		21.2		19.1	24.3	11.6		19.7	6.3	
Progression Factor	1.00	1.00		1.00		1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	13.8	2.6		13.2		0.1	7.3	0.2		2.8	0.0	
Delay (s)	38.1	26.5		34.4		19.3	31.5	11.8		22.4	6.4	
Level of Service	D	C		C		B	C	B		C	A	
Approach Delay (s)		31.1			28.2			11.9			9.8	
Approach LOS		C			C			B			A	

Intersection Summary				
HCM Average Control Delay	13.6	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.49			
Actuated Cycle Length (s)	49.7	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	50.4%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	297	237	123	32	99	17	94	366	39	25	432	251
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85		0.98		1.00	0.99		1.00	0.94	
Flt Protected	0.95	1.00	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583		1814		1770	3488		1770	3344	
Flt Permitted	0.95	1.00	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1583		1814		1770	3488		1770	3344	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	313	249	129	34	104	18	99	385	41	26	455	264
RTOR Reduction (vph)	0	0	98	0	8	0	0	11	0	0	119	0
Lane Group Flow (vph)	313	249	31	0	148	0	99	415	0	26	600	0
Turn Type	Split		Prot	Split			Prot			Prot		
Protected Phases	4	4	4	8	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	14.0	14.0	14.0		8.1		3.7	18.9		1.2	16.4	
Effective Green, g (s)	14.0	14.0	14.0		8.1		3.7	18.9		1.2	16.4	
Actuated g/C Ratio	0.24	0.24	0.24		0.14		0.06	0.32		0.02	0.28	
Clearance Time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	426	448	381		252		113	1133		36	942	
v/s Ratio Prot	c0.18	0.13	0.02		c0.08		c0.06	0.12		0.01	c0.18	
v/s Ratio Perm												
v/c Ratio	0.73	0.56	0.08		0.59		0.88	0.37		0.72	0.64	
Uniform Delay, d1	20.4	19.4	17.1		23.5		27.0	15.1		28.3	18.3	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	6.5	1.5	0.1		3.5		48.0	0.2		52.1	1.4	
Delay (s)	26.8	20.9	17.2		27.0		75.0	15.3		80.4	19.7	
Level of Service	C	C	B		C		E	B		F	B	
Approach Delay (s)		22.9			27.0			26.5			21.8	
Approach LOS		C			C			C			C	

Intersection Summary				
HCM Average Control Delay	23.7	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.66			
Actuated Cycle Length (s)	58.2	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	63.0%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBR	EBR2	NWL2	NWL	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	72	271	315	96	168	110	258	985	92	153	555	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.97		0.97	0.91		1.00	0.91	
Frt	1.00	0.85	0.85	1.00	0.94		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1583	1583	1770	3300		3433	5020		1770	5030	
Flt Permitted	0.95	1.00	1.00	0.95	0.97		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1583	1583	1770	3300		3433	5020		1770	5030	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	80	301	350	107	187	122	287	1094	102	170	617	48
RTOR Reduction (vph)	0	0	227	0	112	0	0	19	0	0	15	0
Lane Group Flow (vph)	80	301	123	107	197	0	287	1178	0	170	651	0
Turn Type		Perm	Perm	Split			Prot			Prot		
Protected Phases	2			6	6		3	8		7	4	
Permitted Phases		2	2									
Actuated Green, G (s)	16.7	16.7	16.7	4.8	4.8		6.0	15.6		6.9	16.5	
Effective Green, g (s)	16.7	16.7	16.7	4.8	4.8		6.0	15.6		6.9	16.5	
Actuated g/C Ratio	0.28	0.28	0.28	0.08	0.08		0.10	0.26		0.12	0.28	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	493	441	441	142	264		343	1305		204	1383	
v/s Ratio Prot	0.05			c0.06	0.06		0.08	c0.23		c0.10	0.13	
v/s Ratio Perm		c0.19	0.08									
v/c Ratio	0.16	0.68	0.28	0.75	0.75		0.84	0.90		0.83	0.47	
Uniform Delay, d1	16.4	19.3	16.9	27.0	27.0		26.5	21.5		26.0	18.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.7	8.3	1.6	20.0	10.9		16.1	8.9		24.3	0.3	
Delay (s)	17.1	27.6	18.5	47.0	37.9		42.6	30.4		50.3	18.4	
Level of Service	B	C	B	D	D		D	C		D	B	
Approach Delay (s)	22.1				40.2			32.7			24.9	
Approach LOS	C				D			C			C	

Intersection Summary				
HCM Average Control Delay	29.5	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.79			
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	56.3%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	198	25	145	4	11	4	99	24	8	2	7	95
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	220	28	161	4	12	4	110	27	9	2	8	106

Direction, Lane #	SE 1	SE 2	NW 1	NE 1	SW 1
Volume Total (vph)	248	161	21	146	116
Volume Left (vph)	220	0	4	110	2
Volume Right (vph)	0	161	4	9	106
Hadj (s)	0.48	-0.67	-0.05	0.15	-0.51
Departure Headway (s)	5.7	4.5	5.1	5.2	4.6
Degree Utilization, x	0.39	0.20	0.03	0.21	0.15
Capacity (veh/h)	610	764	643	650	720
Control Delay (s)	11.1	7.5	8.3	9.6	8.4
Approach Delay (s)	9.6		8.3	9.6	8.4
Approach LOS	A		A	A	A

Intersection Summary				
Delay	9.4			
HCM Level of Service	A			
Intersection Capacity Utilization	39.5%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	116	50	70	55	26	9	108	733	134	6	351	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85		0.99		1.00	0.98		1.00	0.97	
Flt Protected		0.97	1.00		0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1800	1583		1783		1770	3457		1770	3439	
Flt Permitted		0.97	1.00		0.97		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1800	1583		1783		1770	3457		1770	3439	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	129	56	78	61	29	10	120	814	149	7	390	91
RTOR Reduction (vph)	0	0	66	0	6	0	0	16	0	0	23	0
Lane Group Flow (vph)	0	185	12	0	94	0	120	947	0	7	459	0
Turn Type	Split		Prot	Split			Prot			Prot		
Protected Phases	4	4	4	8	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)		8.7	8.7		6.5		5.7	25.5		0.7	20.5	
Effective Green, g (s)		8.7	8.7		6.5		5.7	25.5		0.7	20.5	
Actuated g/C Ratio		0.15	0.15		0.11		0.10	0.44		0.01	0.36	
Clearance Time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		273	240		202		176	1536		22	1228	
v/s Ratio Prot		c0.10	0.01		c0.05		c0.07	c0.27		0.00	0.13	
v/s Ratio Perm												
v/c Ratio		0.68	0.05		0.46		0.68	0.62		0.32	0.37	
Uniform Delay, d1		23.0	20.8		23.8		25.0	12.2		28.1	13.7	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		6.5	0.1		1.7		10.4	0.7		8.2	0.2	
Delay (s)		29.6	20.9		25.5		35.4	13.0		36.3	13.9	
Level of Service		C	C		C		D	B		D	B	
Approach Delay (s)		27.0			25.5			15.4			14.2	
Approach LOS		C			C			B			B	

Intersection Summary				
HCM Average Control Delay	17.2	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.59			
Actuated Cycle Length (s)	57.4	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	49.5%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑		↰↰	↑↑					↰	↕	↱
Volume (vph)	0	620	137	604	871	0	0	0	0	835	1	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		0.97	0.95					0.95	0.91	0.95
Frt		0.97		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.95	1.00
Satd. Flow (prot)		3443		3433	3539					1681	1612	1504
Flt Permitted		1.00		0.95	1.00					0.95	0.95	1.00
Satd. Flow (perm)		3443		3433	3539					1681	1612	1504
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	689	152	671	968	0	0	0	0	928	1	81
RTOR Reduction (vph)	0	31	0	0	0	0	0	0	0	0	1	50
Lane Group Flow (vph)	0	810	0	671	968	0	0	0	0	473	463	23
Turn Type				Prot						Split		Prot
Protected Phases		4		3	8					6	6	6
Permitted Phases												
Actuated Green, G (s)		16.3		12.8	33.1					18.6	18.6	18.6
Effective Green, g (s)		16.3		12.8	33.1					18.6	18.6	18.6
Actuated g/C Ratio		0.27		0.21	0.55					0.31	0.31	0.31
Clearance Time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		940		736	1962					524	502	469
v/s Ratio Prot		c0.24		c0.20	0.27					0.28	c0.29	0.02
v/s Ratio Perm												
v/c Ratio		0.86		0.91	0.49					0.90	0.92	0.05
Uniform Delay, d1		20.6		22.9	8.2					19.7	19.8	14.4
Progression Factor		1.00		1.00	1.00					1.00	1.00	1.00
Incremental Delay, d2		8.2		15.5	0.2					18.7	22.5	0.0
Delay (s)		28.8		38.4	8.4					38.4	42.3	14.4
Level of Service		C		D	A					D	D	B
Approach Delay (s)		28.8			20.7			0.0			38.5	
Approach LOS		C			C			A			D	

Intersection Summary				
HCM Average Control Delay	27.8	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.90			
Actuated Cycle Length (s)	59.7	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	80.9%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑			↑↑	↱	↰	↕	↱			
Volume (vph)	123	1364	0	0	987	780	439	7	667	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	0.97	0.95			0.95	1.00	0.95	0.91	0.95			
Frt	1.00	1.00			1.00	0.85	1.00	0.87	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99	1.00			
Satd. Flow (prot)	3433	3539			3539	1583	1681	1472	1504			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99	1.00			
Satd. Flow (perm)	3433	3539			3539	1583	1681	1472	1504			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	137	1516	0	0	1097	867	488	8	741	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	524	0	13	13	0	0	0
Lane Group Flow (vph)	137	1516	0	0	1097	343	429	395	387	0	0	0
Turn Type	Prot					Prot	Split		Prot			
Protected Phases	7	4			8	8	2	2	2			
Permitted Phases												
Actuated Green, G (s)	3.4	30.2			22.8	22.8	19.5	19.5	19.5			
Effective Green, g (s)	3.4	30.2			22.8	22.8	19.5	19.5	19.5			
Actuated g/C Ratio	0.06	0.52			0.40	0.40	0.34	0.34	0.34			
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0			
Lane Grp Cap (vph)	202	1852			1398	626	568	497	508			
v/s Ratio Prot	0.04	c0.43			0.31	0.22	0.26	c0.27	0.26			
v/s Ratio Perm												
v/c Ratio	0.68	0.82			0.78	0.55	0.76	0.80	0.76			
Uniform Delay, d1	26.6	11.5			15.3	13.5	17.0	17.3	17.0			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	8.7	2.9			3.0	1.0	5.7	8.6	6.7			
Delay (s)	35.3	14.4			18.3	14.4	22.7	25.9	23.7			
Level of Service	D	B			B	B	C	C	C			
Approach Delay (s)		16.1			16.6			24.1			0.0	
Approach LOS		B			B			C			A	

Intersection Summary				
HCM Average Control Delay	18.3	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.81			
Actuated Cycle Length (s)	57.7	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	80.9%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	38	30	28	476	22	105	75	901	214	183	1362	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.95	0.91	0.95	0.95	0.91	0.95	1.00	0.91		1.00	0.91	
Frt	1.00	0.99	0.85	1.00	0.99	0.85	1.00	0.97		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1681	1668	1504	1681	1614	1504	1770	4939		1770	5071	
Flt Permitted	0.95	1.00	1.00	0.95	0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1681	1668	1504	1681	1614	1504	1770	4939		1770	5071	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	42	33	31	529	24	117	83	1001	238	203	1513	28
RTOR Reduction (vph)	0	3	26	0	2	80	0	40	0	0	2	0
Lane Group Flow (vph)	38	37	2	280	283	25	83	1199	0	203	1539	0
Turn Type	Split		Prot	Split		Prot	Prot			Prot		
Protected Phases	4	4	4	8	8	8	5	2!		6!		
Permitted Phases											6	
Actuated Green, G (s)	5.7	5.7	5.7	17.6	17.6	17.6	4.3	39.7		31.4	31.4	
Effective Green, g (s)	5.7	5.7	5.7	17.6	17.6	17.6	4.3	39.7		31.4	31.4	
Actuated g/C Ratio	0.08	0.08	0.08	0.23	0.23	0.23	0.06	0.53		0.42	0.42	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	128	127	114	394	379	353	101	2614		741	2123	
v/s Ratio Prot	c0.02	0.02	0.00	0.17	c0.18	0.02	c0.05	0.24		0.11		
v/s Ratio Perm											c0.30	
v/c Ratio	0.30	0.29	0.02	0.71	0.75	0.07	0.82	0.46		0.27	0.73	
Uniform Delay, d1	32.8	32.7	32.1	26.4	26.6	22.3	35.0	11.0		14.3	18.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.3	1.3	0.1	5.9	7.9	0.1	39.3	0.1		0.2	1.3	
Delay (s)	34.1	34.0	32.1	32.3	34.5	22.4	74.2	11.1		14.5	19.5	
Level of Service	C	C	C	C	C	C	E	B		B	B	
Approach Delay (s)		33.5			31.7			15.1			18.9	
Approach LOS		C			C			B			B	

Intersection Summary				
HCM Average Control Delay	20.2	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.70			
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	63.8%	ICU Level of Service	B	
Analysis Period (min)	15			

! Phase conflict between lane groups.
c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	166	807	170	341	982	0	0	631	764
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0	4.0	4.0	4.0	4.0			4.0	4.0
Lane Util. Factor				0.97	0.91	1.00	0.97	0.95			0.86	0.86
Frpb, ped/bikes				1.00	1.00	1.00	1.00	1.00			0.91	1.00
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00			1.00	1.00
Frt				1.00	1.00	0.85	1.00	1.00			0.94	0.85
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				3433	5085	1583	3433	3539			4146	1362
Flt Permitted				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)				3433	5085	1583	3433	3539			4146	1362
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	184	897	189	379	1091	0	0	701	849
RTOR Reduction (vph)	0	0	0	0	0	69	0	0	0	0	10	10
Lane Group Flow (vph)	0	0	0	184	897	120	379	1091	0	0	1116	414
Confl. Peds. (#/hr)												200
Turn Type				Prot		Perm	Prot					Prot
Protected Phases				3	8		5	2			6	6
Permitted Phases						8						
Actuated Green, G (s)				15.8	15.8	15.8	8.0	34.6			22.6	22.6
Effective Green, g (s)				15.8	15.8	15.8	8.0	34.6			22.6	22.6
Actuated g/C Ratio				0.27	0.27	0.27	0.14	0.59			0.39	0.39
Clearance Time (s)				4.0	4.0	4.0	4.0	4.0			4.0	4.0
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)				929	1376	428	470	2097			1604	527
v/s Ratio Prot				0.05	c0.18		c0.11	0.31			0.27	c0.30
v/s Ratio Perm						0.08						
v/c Ratio				0.20	0.65	0.28	0.81	0.52			0.70	0.79
Uniform Delay, d1				16.4	18.9	16.8	24.4	7.0			15.0	15.8
Progression Factor				1.00	1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2				0.1	1.1	0.4	9.8	0.2			1.3	7.6
Delay (s)				16.5	20.0	17.2	34.2	7.2			16.3	23.3
Level of Service				B	B	B	C	A			B	C
Approach Delay (s)		0.0			19.1			14.2			18.3	
Approach LOS		A			B			B			B	

Intersection Summary				
HCM Average Control Delay	17.1	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.74			
Actuated Cycle Length (s)	58.4	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	105.5%	ICU Level of Service	G	
Analysis Period (min)	15			

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	492	989	92	0	0	0	0	801	385	213	570	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Lane Util. Factor	0.91	0.86	0.91					0.86		1.00	0.91	
Frt	1.00	1.00	0.85					0.95		1.00	1.00	
Flt Protected	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	1610	3192	1441					6096		1770	5085	
Flt Permitted	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	1610	3192	1441					6096		1770	5085	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	547	1099	102	0	0	0	0	890	428	237	633	0
RTOR Reduction (vph)	0	1	54	0	0	0	0	56	0	0	0	0
Lane Group Flow (vph)	492	1163	38	0	0	0	0	1262	0	237	633	0
Turn Type	Split		Prot							Prot		
Protected Phases	4	4	4					2		1	6	
Permitted Phases												
Actuated Green, G (s)	30.5	30.5	30.5					19.0		12.4	35.4	
Effective Green, g (s)	30.5	30.5	30.5					19.0		12.4	35.4	
Actuated g/C Ratio	0.41	0.41	0.41					0.26		0.17	0.48	
Clearance Time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	664	1317	595					1567		297	2436	
v/s Ratio Prot	0.31	c0.36	0.03					c0.21		c0.13	0.12	
v/s Ratio Perm												
v/c Ratio	0.74	0.88	0.06					0.91dr		0.80	0.26	
Uniform Delay, d1	18.4	20.1	13.1					25.7		29.5	11.5	
Progression Factor	1.00	1.00	1.00					1.00		1.00	1.00	
Incremental Delay, d2	4.5	7.3	0.0					3.1		13.8	0.1	
Delay (s)	22.8	27.4	13.1					28.8		43.4	11.5	
Level of Service	C	C	B					C		D	B	
Approach Delay (s)		25.4			0.0			28.8			20.2	
Approach LOS		C			A			C			C	

Intersection Summary				
HCM Average Control Delay	25.4	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.84			
Actuated Cycle Length (s)	73.9	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	105.5%	ICU Level of Service	G	
Analysis Period (min)	15			

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group



Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Volume (vph)	66	383	0	357	94	30	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		0.95		1.00	1.00
Frt	1.00	1.00		0.97		1.00	0.85
Flt Protected	0.95	1.00		1.00		0.95	1.00
Satd. Flow (prot)	1770	3539		3429		1770	1583
Flt Permitted	0.95	1.00		1.00		0.95	1.00
Satd. Flow (perm)	1770	3539		3429		1770	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	73	426	0	397	104	33	51
RTOR Reduction (vph)	0	0	0	44	0	0	47
Lane Group Flow (vph)	73	426	0	457	0	33	4
Turn Type	Prot		Prot				Prot
Protected Phases	7	4	3	8		6	6
Permitted Phases							
Actuated Green, G (s)	1.2	14.0		8.8		1.7	1.7
Effective Green, g (s)	1.2	14.0		8.8		1.7	1.7
Actuated g/C Ratio	0.05	0.59		0.37		0.07	0.07
Clearance Time (s)	4.0	4.0		4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0		3.0	3.0
Lane Grp Cap (vph)	90	2091		1273		127	114
v/s Ratio Prot	c0.04	0.12		c0.13		c0.02	0.00
v/s Ratio Perm							
v/c Ratio	0.81	0.20		0.36		0.26	0.03
Uniform Delay, d1	11.1	2.3		5.4		10.4	10.2
Progression Factor	1.00	1.00		1.00		1.00	1.00
Incremental Delay, d2	40.5	0.0		0.2		1.1	0.1
Delay (s)	51.6	2.3		5.6		11.5	10.3
Level of Service	D	A		A		B	B
Approach Delay (s)		9.5		5.6		10.8	
Approach LOS		A		A		B	

Intersection Summary			
HCM Average Control Delay	7.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	23.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	29.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	EBR2	WBL	WBT	WBR	NBL	NBT	NBR2	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	111	284	290	31	157	96	312	805	111	264	125	137
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.88	1.00	1.00	1.00		1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.85	0.85	1.00	0.94		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	2787	1583	1770	1756		1770	3539	1583	3433	3539	1583
Flt Permitted	0.59	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1094	2787	1583	1770	1756		1770	3539	1583	3433	3539	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	123	316	322	34	174	107	347	894	123	293	139	152
RTOR Reduction (vph)	0	0	254	0	34	0	0	0	80	0	0	115
Lane Group Flow (vph)	123	316	68	34	247	0	347	894	43	293	139	37
Turn Type	custom	custom	custom	Prot			Prot		Prot	Prot		Prot
Protected Phases				3	8		5	2	2	1	6	6
Permitted Phases	4	4	4									
Actuated Green, G (s)	12.6	12.6	12.6	1.5	18.1		15.1	20.9	20.9	8.5	14.3	14.3
Effective Green, g (s)	12.6	12.6	12.6	1.5	18.1		15.1	20.9	20.9	8.5	14.3	14.3
Actuated g/C Ratio	0.21	0.21	0.21	0.03	0.30		0.25	0.35	0.35	0.14	0.24	0.24
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	232	590	335	45	534		449	1243	556	490	851	380
v/s Ratio Prot				0.02	c0.14		c0.20	c0.25	0.03	0.09	0.04	0.02
v/s Ratio Perm	0.11	0.11	0.04									
v/c Ratio	0.53	0.54	0.20	0.76	0.46		0.77	0.72	0.08	0.60	0.16	0.10
Uniform Delay, d1	20.8	20.8	19.3	28.8	16.8		20.6	16.8	12.9	23.9	17.9	17.6
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.3	0.9	0.3	51.4	0.6		8.1	2.0	0.1	2.0	0.1	0.1
Delay (s)	23.1	21.8	19.6	80.2	17.4		28.7	18.8	12.9	25.9	18.0	17.7
Level of Service	C	C	B	F	B		C	B	B	C	B	B
Approach Delay (s)					24.2			20.8			21.9	
Approach LOS					C			C			C	

Intersection Summary				
HCM Average Control Delay	21.4	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.62			
Actuated Cycle Length (s)	59.5	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	63.4%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	908	0	92	0	0	0	0	326	43	348	93	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95	1.00					0.95		0.97	0.95	
Frt	1.00	1.00	0.85					0.98		1.00	1.00	
Flt Protected	0.95	0.95	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	1681	1681	1583					3477		3433	3539	
Flt Permitted	0.95	0.95	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	1681	1681	1583					3477		3433	3539	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1009	0	102	0	0	0	0	362	48	387	103	0
RTOR Reduction (vph)	0	0	63	0	0	0	0	19	0	0	0	0
Lane Group Flow (vph)	504	505	39	0	0	0	0	391	0	387	103	0
Turn Type	Split		Prot							Prot		
Protected Phases	4	4	4					2		1	6	
Permitted Phases												
Actuated Green, G (s)	20.1	20.1	20.1					11.5		8.9	24.4	
Effective Green, g (s)	20.1	20.1	20.1					11.5		8.9	24.4	
Actuated g/C Ratio	0.38	0.38	0.38					0.22		0.17	0.46	
Clearance Time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	644	644	606					762		582	1645	
v/s Ratio Prot	0.30	c0.30	0.02					c0.11		c0.11	0.03	
v/s Ratio Perm												
v/c Ratio	0.78	0.78	0.06					0.51		0.66	0.06	
Uniform Delay, d1	14.3	14.3	10.3					18.0		20.4	7.7	
Progression Factor	1.00	1.00	1.00					1.00		1.00	1.00	
Incremental Delay, d2	6.2	6.2	0.0					0.6		2.9	0.0	
Delay (s)	20.4	20.5	10.3					18.6		23.3	7.8	
Level of Service	C	C	B					B		C	A	
Approach Delay (s)		19.5			0.0			18.6			20.0	
Approach LOS		B			A			B			C	

Intersection Summary				
HCM Average Control Delay	19.5	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.68			
Actuated Cycle Length (s)	52.5	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	55.5%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	127	447	40	91	394	400	48	128	104	230	52	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		0.97	1.00	
Frt	1.00	0.99		1.00	0.92		1.00	0.93		1.00	0.92	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3496		1770	3272		1770	1737		3433	1708	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3496		1770	3272		1770	1737		3433	1708	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	141	497	44	101	438	444	53	142	116	256	58	72
RTOR Reduction (vph)	0	8	0	0	222	0	0	37	0	0	50	0
Lane Group Flow (vph)	141	533	0	101	660	0	53	221	0	256	80	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												
Actuated Green, G (s)	8.7	19.5		7.5	18.3		4.7	15.6		8.7	19.6	
Effective Green, g (s)	8.7	19.5		7.5	18.3		4.7	15.6		8.7	19.6	
Actuated g/C Ratio	0.13	0.29		0.11	0.27		0.07	0.23		0.13	0.29	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	229	1013		197	890		124	403		444	497	
v/s Ratio Prot	c0.08	0.15		0.06	c0.20		0.03	c0.13		c0.07	c0.05	
v/s Ratio Perm												
v/c Ratio	0.62	0.53		0.51	0.74		0.43	0.55		0.58	0.16	
Uniform Delay, d1	27.7	20.0		28.2	22.3		30.0	22.8		27.6	17.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.9	0.5		2.2	3.4		2.4	1.5		1.8	0.2	
Delay (s)	32.6	20.5		30.4	25.7		32.4	24.3		29.4	17.9	
Level of Service	C	C		C	C		C	C		C	B	
Approach Delay (s)		23.0			26.2			25.7			25.5	
Approach LOS		C			C			C			C	

Intersection Summary				
HCM Average Control Delay	25.1	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.66			
Actuated Cycle Length (s)	67.3	Sum of lost time (s)	20.0	
Intersection Capacity Utilization	63.8%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	WBL	WBR	SEL	SET	NWT	NWR	NWR2	SWL	SWR
Lane Configurations									
Volume (vph)	0	0	269	494	621	0	190	147	250
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor			0.97	0.95	0.95		1.00	0.97	1.00
Frt			1.00	1.00	1.00		0.85	1.00	0.85
Flt Protected			0.95	1.00	1.00		1.00	0.95	1.00
Satd. Flow (prot)			3433	3539	3539		1583	3433	1583
Flt Permitted			0.95	1.00	1.00		1.00	0.95	1.00
Satd. Flow (perm)			3433	3539	3539		1583	3433	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	299	549	690	0	211	163	278
RTOR Reduction (vph)	0	0	0	0	0	0	136	0	228
Lane Group Flow (vph)	0	0	299	549	690	0	75	163	50
Turn Type			Prot				Perm		Perm
Protected Phases			5	2	6			4	
Permitted Phases							6		4
Actuated Green, G (s)			9.5	29.8	16.3		16.3	8.3	8.3
Effective Green, g (s)			9.5	29.8	16.3		16.3	8.3	8.3
Actuated g/C Ratio			0.21	0.65	0.35		0.35	0.18	0.18
Clearance Time (s)			4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)			3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)			707	2288	1251		560	618	285
v/s Ratio Prot			c0.09	0.16	c0.19			c0.05	
v/s Ratio Perm							0.05		0.03
v/c Ratio			0.42	0.24	0.55		0.13	0.26	0.18
Uniform Delay, d1			15.9	3.4	12.0		10.1	16.3	16.0
Progression Factor			1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2			0.4	0.1	0.5		0.1	0.2	0.3
Delay (s)			16.3	3.5	12.5		10.2	16.5	16.3
Level of Service			B	A	B		B	B	B
Approach Delay (s)	0.0			8.0	12.0			16.4	
Approach LOS	A			A	B			B	

Intersection Summary				
HCM Average Control Delay	11.3	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.45			
Actuated Cycle Length (s)	46.1	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	39.3%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL2	EBL	EBR	SEL	SET	SER	NWL	NWT	NWR	SWL	SWR
Lane Configurations											
Volume (vph)	399	0	241	270	375	0	0	401	255	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		
Lane Util. Factor	0.95	0.95	1.00	0.97	0.95			0.95	1.00		
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		
Flt Protected	0.95	0.95	1.00	0.95	1.00			1.00	1.00		
Satd. Flow (prot)	1681	1681	1583	3433	3539			3539	1583		
Flt Permitted	0.95	0.95	1.00	0.95	1.00			1.00	1.00		
Satd. Flow (perm)	1681	1681	1583	3433	3539			3539	1583		
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	443	0	268	300	417	0	0	446	283	0	0
RTOR Reduction (vph)	0	0	192	0	0	0	0	0	200	0	0
Lane Group Flow (vph)	221	222	76	300	417	0	0	446	83	0	0
Turn Type	Split		Prot	Prot					Prot		
Protected Phases	4	4	4	1	6			2	2		
Permitted Phases											
Actuated Green, G (s)	11.4	11.4	11.4	5.2	21.0			11.8	11.8		
Effective Green, g (s)	11.4	11.4	11.4	5.2	21.0			11.8	11.8		
Actuated g/C Ratio	0.28	0.28	0.28	0.13	0.52			0.29	0.29		
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0		
Lane Grp Cap (vph)	474	474	447	442	1840			1034	462		
v/s Ratio Prot	0.13	c0.13	0.05	c0.09	0.12			c0.13	0.05		
v/s Ratio Perm											
v/c Ratio	0.47	0.47	0.17	0.68	0.23			0.43	0.18		
Uniform Delay, d1	12.0	12.0	10.9	16.8	5.3			11.6	10.7		
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00	1.00		
Incremental Delay, d2	0.7	0.7	0.2	4.1	0.1			0.3	0.2		
Delay (s)	12.7	12.7	11.1	20.9	5.3			11.9	10.9		
Level of Service	B	B	B	C	A			B	B		
Approach Delay (s)		12.1			11.9			11.5		0.0	
Approach LOS		B			B			B		A	

Intersection Summary				
HCM Average Control Delay	11.8	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.49			
Actuated Cycle Length (s)	40.4	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	39.8%	ICU Level of Service	A	
Analysis Period (min)	15			

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	5	5	4	55	12	10	12	746	100	15	419	10
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	6	6	4	61	13	11	13	829	111	17	466	11

Direction, Lane #	EB 1	WB 1	NE 1	NE 2	SW 1	SW 2
Volume Total (vph)	16	86	428	526	249	244
Volume Left (vph)	6	61	13	0	17	0
Volume Right (vph)	4	11	0	111	0	11
Hadj (s)	-0.07	0.10	0.05	-0.11	0.07	0.00
Departure Headway (s)	6.7	6.6	5.5	5.3	6.0	6.0
Degree Utilization, x	0.03	0.16	0.65	0.78	0.42	0.40
Capacity (veh/h)	501	515	638	663	579	585
Control Delay (s)	9.9	10.8	17.0	23.2	12.1	11.7
Approach Delay (s)	9.9	10.8	20.4		11.9	
Approach LOS	A	B	C		B	

Intersection Summary				
Delay	17.1			
HCM Level of Service	C			
Intersection Capacity Utilization	47.1%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	352	372	291	448	8	371	5	151	1	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.95	1.00		0.98	
Satd. Flow (prot)	1770	1863	1583	1770	1858			1775	1583		1750	
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.95	1.00		0.98	
Satd. Flow (perm)	1770	1863	1583	1770	1858			1775	1583		1750	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	2	391	413	323	498	9	412	6	168	1	1	1
RTOR Reduction (vph)	0	0	267	0	1	0	0	0	121	0	1	0
Lane Group Flow (vph)	2	391	146	323	506	0	0	418	47	0	2	0
Turn Type	Prot		Prot	Prot			Split		Prot	Split		
Protected Phases	7	4	4	3	8		2	2	2	6	6	
Permitted Phases												
Actuated Green, G (s)	0.8	22.3	22.3	16.7	38.2			21.6	21.6		1.1	
Effective Green, g (s)	0.8	22.3	22.3	16.7	38.2			21.6	21.6		1.1	
Actuated g/C Ratio	0.01	0.29	0.29	0.21	0.49			0.28	0.28		0.01	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	18	535	454	380	913			493	440		25	
v/s Ratio Prot	0.00	c0.21	0.09	c0.18	0.27			c0.24	0.03		c0.00	
v/s Ratio Perm												
v/c Ratio	0.11	0.73	0.32	0.85	0.55			0.85	0.11		0.08	
Uniform Delay, d1	38.1	25.0	21.8	29.3	13.8			26.5	20.9		37.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	2.7	5.1	0.4	16.4	0.7			12.8	0.1		1.4	
Delay (s)	40.8	30.1	22.2	45.7	14.5			39.3	21.0		39.2	
Level of Service	D	C	C	D	B			D	C		D	
Approach Delay (s)		26.1			26.7			34.0			39.2	
Approach LOS		C			C			C			D	

Intersection Summary				
HCM Average Control Delay	28.4	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.79			
Actuated Cycle Length (s)	77.7	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	72.1%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Volume (vph)	395	299	0	197	283	281	432
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00		1.00	1.00	1.00	0.95
Frt	1.00	0.85		1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00		1.00	1.00	0.95	1.00
Satd. Flow (prot)	3433	1583		1863	1583	1770	3539
Flt Permitted	0.95	1.00		1.00	1.00	0.95	1.00
Satd. Flow (perm)	3433	1583		1863	1583	1770	3539
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	439	332	0	219	314	312	480
RTOR Reduction (vph)	0	248	0	0	240	0	0
Lane Group Flow (vph)	439	84	0	219	74	312	480
Turn Type		Perm	Prot		Perm	Prot	
Protected Phases	1		3	8		7	
Permitted Phases		1			8		6
Actuated Green, G (s)	12.9	12.9		12.0	12.0	14.0	12.9
Effective Green, g (s)	12.9	12.9		12.0	12.0	14.0	12.9
Actuated g/C Ratio	0.25	0.25		0.24	0.24	0.28	0.25
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	870	401		439	373	487	897
v/s Ratio Prot	0.13			c0.12		c0.18	
v/s Ratio Perm		0.05			0.05		c0.14
v/c Ratio	0.50	0.21		0.50	0.20	0.64	0.54
Uniform Delay, d1	16.3	15.0		16.8	15.6	16.2	16.4
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5	0.3		0.9	0.3	2.9	0.6
Delay (s)	16.7	15.2		17.7	15.9	19.1	17.0
Level of Service	B	B		B	B	B	B
Approach Delay (s)	16.1			16.6			17.8
Approach LOS	B			B			B

Intersection Summary				
HCM Average Control Delay	16.9	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.56			
Actuated Cycle Length (s)	50.9	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	47.2%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Volume (vph)	84	7	0	454	50	3	836
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0		4.0	4.0
Lane Util. Factor	0.97			0.95		1.00	0.95
Frt	0.99			0.98		1.00	1.00
Flt Protected	0.96			1.00		0.95	1.00
Satd. Flow (prot)	3414			3486		1770	3539
Flt Permitted	0.96			1.00		0.95	1.00
Satd. Flow (perm)	3414			3486		1770	3539
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	93	8	0	504	56	3	929
RTOR Reduction (vph)	7	0	0	13	0	0	0
Lane Group Flow (vph)	94	0	0	547	0	3	929
Turn Type			Prot			Prot	
Protected Phases	8		5	2		1	6
Permitted Phases							
Actuated Green, G (s)	3.1			14.9		0.6	19.5
Effective Green, g (s)	3.1			14.9		0.6	19.5
Actuated g/C Ratio	0.10			0.49		0.02	0.64
Clearance Time (s)	4.0			4.0		4.0	4.0
Vehicle Extension (s)	3.0			3.0		3.0	3.0
Lane Grp Cap (vph)	346			1697		35	2255
v/s Ratio Prot	c0.03			0.16		0.00	c0.26
v/s Ratio Perm							
v/c Ratio	0.27			0.32		0.09	0.41
Uniform Delay, d1	12.7			4.8		14.7	2.7
Progression Factor	1.00			1.00		1.00	1.00
Incremental Delay, d2	0.4			0.1		1.1	0.1
Delay (s)	13.1			4.9		15.8	2.9
Level of Service	B			A		B	A
Approach Delay (s)	13.1			4.9			2.9
Approach LOS	B			A			A

Intersection Summary			
HCM Average Control Delay	4.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	30.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	111	19	63	82	149	6	311	16	160	686	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	0.90		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1822		1770	1682		1770	3513		1770	3469	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1822		1770	1682		1770	3513		1770	3469	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	26	123	21	70	91	166	7	346	18	178	762	116
RTOR Reduction (vph)	0	11	0	0	114	0	0	6	0	0	17	0
Lane Group Flow (vph)	26	133	0	70	143	0	7	358	0	178	861	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	0.7	10.6		2.3	12.2		0.7	13.9		6.8	20.0	
Effective Green, g (s)	0.7	10.6		2.3	12.2		0.7	13.9		6.8	20.0	
Actuated g/C Ratio	0.01	0.21		0.05	0.25		0.01	0.28		0.14	0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	25	389		82	414		25	984		243	1399	
v/s Ratio Prot	0.01	0.07		c0.04	c0.09		0.00	0.10		c0.10	c0.25	
v/s Ratio Perm												
v/c Ratio	1.04	0.34		0.85	0.35		0.28	0.36		0.73	0.62	
Uniform Delay, d1	24.4	16.5		23.5	15.4		24.2	14.3		20.5	11.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	192.8	0.5		53.6	0.5		6.0	0.2		10.8	0.8	
Delay (s)	217.2	17.1		77.1	15.9		30.2	14.5		31.4	12.6	
Level of Service	F	B		E	B		C	B		C	B	
Approach Delay (s)		47.7			29.0			14.8			15.7	
Approach LOS		D			C			B			B	

Intersection Summary			
HCM Average Control Delay	20.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	49.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	83	70	93	137	36	40	331	55	41	774	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.97		1.00	0.98		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1805		1770	3464		1770	3534	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1583	1770	1805		1770	3464		1770	3534	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	6	92	78	103	152	40	44	368	61	46	860	8
RTOR Reduction (vph)	0	0	64	0	17	0	0	20	0	0	1	0
Lane Group Flow (vph)	6	92	14	103	175	0	44	409	0	46	867	0
Turn Type	Prot		Prot	Prot			Prot			Prot		
Protected Phases	7	4	4	3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	0.6	8.4	8.4	3.5	11.3		1.3	17.5		1.3	17.5	
Effective Green, g (s)	0.6	8.4	8.4	3.5	11.3		1.3	17.5		1.3	17.5	
Actuated g/C Ratio	0.01	0.18	0.18	0.07	0.24		0.03	0.37		0.03	0.37	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	23	335	285	133	437		49	1298		49	1324	
v/s Ratio Prot	0.00	0.05	0.01	c0.06	c0.10		0.02	0.12		c0.03	c0.25	
v/s Ratio Perm												
v/c Ratio	0.26	0.27	0.05	0.77	0.40		0.90	0.32		0.94	0.65	
Uniform Delay, d1	22.8	16.5	15.8	21.2	14.9		22.6	10.4		22.7	12.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	6.0	0.4	0.1	24.0	0.6		90.0	0.1		104.4	1.2	
Delay (s)	28.8	17.0	15.9	45.2	15.5		112.6	10.5		127.1	13.3	
Level of Service	C	B	B	D	B		F	B		F	B	
Approach Delay (s)		16.9			25.8			20.0			19.0	
Approach LOS		B			C			B			B	

Intersection Summary				
HCM Average Control Delay	20.1	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.61			
Actuated Cycle Length (s)	46.7	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	46.8%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	93	858	23	90	858	199	68	56	86	448	22	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.95			1.00	1.00	0.95	0.95	
Frt	1.00	1.00		1.00	0.97			1.00	0.85	1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00	0.95	0.97	
Satd. Flow (prot)	1770	5065		1770	3439			1813	1583	1681	1638	
Flt Permitted	0.95	1.00		0.95	1.00			0.97	1.00	0.95	0.97	
Satd. Flow (perm)	1770	5065		1770	3439			1813	1583	1681	1638	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	103	953	26	100	953	221	76	62	96	498	24	91
RTOR Reduction (vph)	0	3	0	0	21	0	0	0	83	0	17	0
Lane Group Flow (vph)	103	976	0	100	1153	0	0	138	13	314	282	0
Turn Type	Prot			Prot			Split		Perm	Split		
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases									2			
Actuated Green, G (s)	6.4	30.2		8.1	31.9			11.6	11.6	17.9	17.9	
Effective Green, g (s)	6.4	30.2		8.1	31.9			11.6	11.6	17.9	17.9	
Actuated g/C Ratio	0.08	0.36		0.10	0.38			0.14	0.14	0.21	0.21	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	135	1825		171	1309			251	219	359	350	
v/s Ratio Prot	c0.06	0.19		0.06	c0.34			c0.08		c0.19	0.17	
v/s Ratio Perm									0.01			
v/c Ratio	0.76	0.54		0.58	0.88			0.55	0.06	0.87	0.80	
Uniform Delay, d1	38.0	21.2		36.2	24.2			33.7	31.4	31.9	31.3	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2	22.2	0.3		5.0	7.2			2.5	0.1	20.4	12.6	
Delay (s)	60.1	21.5		41.3	31.4			36.1	31.5	52.2	43.9	
Level of Service	E	C		D	C			D	C	D	D	
Approach Delay (s)		25.2			32.2			34.2			48.2	
Approach LOS		C			C			C			D	

Intersection Summary				
HCM Average Control Delay	33.0	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.77			
Actuated Cycle Length (s)	83.8	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	67.4%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑			↑↑		↱
Volume (veh/h)	1404	53	0	1360	0	135
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	1560	59	0	1511	0	150
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	575			607		
pX, platoon unblocked			0.87		0.83	0.87
vC, conflicting volume			1619		2345	549
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1180		1251	0
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	84
cM capacity (veh/h)			510		136	941

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1
Volume Total	624	624	371	756	756	150
Volume Left	0	0	0	0	0	0
Volume Right	0	0	59	0	0	150
cSH	1700	1700	1700	1700	1700	941
Volume to Capacity	0.37	0.37	0.22	0.44	0.44	0.16
Queue Length 95th (ft)	0	0	0	0	0	14
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	9.5
Lane LOS						A
Approach Delay (s)	0.0			0.0		9.5
Approach LOS						A

Intersection Summary				
Average Delay	0.4			
Intersection Capacity Utilization	43.3%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↰↑↑	↱
Volume (vph)	0	770	1025	0	932	326
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		0.97	0.91
Frt		1.00	1.00		0.99	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3539	3539		3430	1441
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3539	3539		3430	1441
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	856	1139	0	1036	362
RTOR Reduction (vph)	0	0	0	0	2	20
Lane Group Flow (vph)	0	856	1139	0	1070	306
Turn Type						Prot
Protected Phases		4	8		6	6
Permitted Phases						
Actuated Green, G (s)		49.0	49.0		63.0	63.0
Effective Green, g (s)		49.0	49.0		63.0	63.0
Actuated g/C Ratio		0.41	0.41		0.52	0.52
Clearance Time (s)		4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1445	1445		1801	757
v/s Ratio Prot		0.24	c0.32		c0.31	0.21
v/s Ratio Perm						
v/c Ratio		0.59	0.79		0.59	0.40
Uniform Delay, d1		27.7	31.0		19.7	17.2
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		0.7	2.9		1.5	1.6
Delay (s)		28.4	33.9		21.1	18.8
Level of Service		C	C		C	B
Approach Delay (s)		28.4	33.9		20.6	
Approach LOS		C	C		C	

Intersection Summary			
HCM Average Control Delay	27.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	64.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	224	1457	0	0	1495	911	373	0	929	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	0.97	0.95			0.91	1.00	0.95	0.91	0.95			
Frt	1.00	1.00			1.00	0.85	1.00	0.86	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (prot)	3433	3539			5085	1583	1681	1455	1504			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (perm)	3433	3539			5085	1583	1681	1455	1504			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	249	1619	0	0	1661	1012	414	0	1032	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	449	0	13	13	0	0	0
Lane Group Flow (vph)	249	1619	0	0	1661	563	373	523	524	0	0	0
Turn Type	Prot					Prot	Split		Prot			
Protected Phases	7	4			8	8	2	2	2			
Permitted Phases												
Actuated Green, G (s)	10.0	67.0			53.0	53.0	45.0	45.0	45.0			
Effective Green, g (s)	10.0	67.0			53.0	53.0	45.0	45.0	45.0			
Actuated g/C Ratio	0.08	0.56			0.44	0.44	0.38	0.38	0.38			
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0			
Lane Grp Cap (vph)	286	1976			2246	699	630	546	564			
v/s Ratio Prot	0.07	c0.46			0.33	0.36	0.22	c0.36	0.35			
v/s Ratio Perm												
v/c Ratio	0.87	0.82			0.74	0.80	0.59	0.96	0.93			
Uniform Delay, d1	54.4	21.6			27.8	29.0	30.1	36.6	36.0			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	23.8	2.8			1.3	6.7	4.1	29.3	23.9			
Delay (s)	78.2	24.4			29.1	35.7	34.2	65.9	59.8			
Level of Service	E	C			C	D	C	E	E			
Approach Delay (s)		31.5			31.6			55.5			0.0	
Approach LOS		C			C			E			A	

Intersection Summary				
HCM Average Control Delay	37.3	HCM Level of Service	D	
HCM Volume to Capacity ratio	0.88			
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	92.6%	ICU Level of Service	F	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	108	1538	674	100	1898	67	195	10	41	107	57	303
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		0.97	0.95		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.88		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5059		3433	3111		1770	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5059		3433	3111		1770	1863	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	120	1709	749	111	2109	74	217	11	46	119	63	337
RTOR Reduction (vph)	0	0	361	0	4	0	0	40	0	0	0	136
Lane Group Flow (vph)	120	1709	388	111	2179	0	217	17	0	119	63	201
Turn Type	Prot		Prot	Prot			Prot			Prot		Prot
Protected Phases	7	4	4	3	8		5	2		1	6	6
Permitted Phases												
Actuated Green, G (s)	7.9	42.1	42.1	6.9	41.1		7.0	12.1		10.2	15.3	15.3
Effective Green, g (s)	7.9	42.1	42.1	6.9	41.1		7.0	12.1		10.2	15.3	15.3
Actuated g/C Ratio	0.09	0.48	0.48	0.08	0.47		0.08	0.14		0.12	0.18	0.18
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	160	2452	763	140	2382		275	431		207	327	277
v/s Ratio Prot	c0.07	0.34	0.24	0.06	c0.43		c0.06	0.01		0.07	0.03	c0.13
v/s Ratio Perm												
v/c Ratio	0.75	0.70	0.51	0.79	0.91		0.79	0.04		0.57	0.19	0.73
Uniform Delay, d1	38.7	17.6	15.5	39.5	21.5		39.4	32.6		36.5	30.7	34.0
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	17.8	0.9	0.5	25.7	6.0		13.9	0.0		3.8	0.3	9.1
Delay (s)	56.5	18.5	16.0	65.2	27.5		53.3	32.6		40.3	31.0	43.1
Level of Service	E	B	B	E	C		D	C		D	C	D
Approach Delay (s)		19.6			29.3			49.0			41.0	
Approach LOS		B			C			D			D	

Intersection Summary				
HCM Average Control Delay	26.9	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.84			
Actuated Cycle Length (s)	87.3	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	72.5%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↱	↰	↑↑↑	↰↰	↱
Volume (vph)	1520	166	129	2026	50	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	5085	1583	1770	5085	3433	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	5085	1583	1770	5085	3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1652	180	140	2202	54	42
RTOR Reduction (vph)	0	83	0	0	0	39
Lane Group Flow (vph)	1652	97	140	2202	54	3
Turn Type		Perm	Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	25.1	25.1	5.9	35.0	3.6	3.6
Effective Green, g (s)	25.1	25.1	5.9	35.0	3.6	3.6
Actuated g/C Ratio	0.54	0.54	0.13	0.75	0.08	0.08
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2739	853	224	3819	265	122
v/s Ratio Prot	0.32		0.08	c0.43	c0.02	
v/s Ratio Perm		0.06				0.00
v/c Ratio	0.60	0.11	0.62	0.58	0.20	0.03
Uniform Delay, d1	7.3	5.3	19.3	2.5	20.2	19.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.1	5.3	0.2	0.4	0.1
Delay (s)	7.7	5.3	24.6	2.8	20.5	20.0
Level of Service	A	A	C	A	C	B
Approach Delay (s)	7.5			4.1	20.3	
Approach LOS	A			A	C	

Intersection Summary				
HCM Average Control Delay	5.9	HCM Level of Service	A	
HCM Volume to Capacity ratio	0.54			
Actuated Cycle Length (s)	46.6	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	49.8%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↱	↰↰	↑↑↑	↰	↱
Volume (vph)	1409	150	138	2113	42	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	0.97	0.91	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	5085	1583	3433	5085	1770	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	5085	1583	3433	5085	1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1532	163	150	2297	46	46
RTOR Reduction (vph)	0	78	0	0	0	42
Lane Group Flow (vph)	1532	85	150	2297	46	4
Turn Type		Perm	Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	20.4	20.4	3.1	27.5	3.8	3.8
Effective Green, g (s)	20.4	20.4	3.1	27.5	3.8	3.8
Actuated g/C Ratio	0.52	0.52	0.08	0.70	0.10	0.10
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2640	822	271	3558	171	153
v/s Ratio Prot	0.30		0.04	c0.45	c0.03	
v/s Ratio Perm		0.05				0.00
v/c Ratio	0.58	0.10	0.55	0.65	0.27	0.03
Uniform Delay, d1	6.5	4.8	17.4	3.2	16.5	16.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	0.1	2.4	0.4	0.9	0.1
Delay (s)	6.8	4.9	19.9	3.6	17.3	16.2
Level of Service	A	A	B	A	B	B
Approach Delay (s)	6.6			4.6	16.7	
Approach LOS	A			A	B	

Intersection Summary				
HCM Average Control Delay	5.7	HCM Level of Service	A	
HCM Volume to Capacity ratio	0.60			
Actuated Cycle Length (s)	39.3	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	50.8%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	225	937	305	243	1552	92	257	105	87	159	305	442
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.91		0.97	0.91		0.97	0.91	1.00	0.97	0.91	
Frt	1.00	0.96		1.00	0.99		1.00	1.00	0.85	1.00	0.91	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	4898		3433	5043		3433	5085	1583	3433	4634	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3433	4898		3433	5043		3433	5085	1583	3433	4634	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	250	1041	339	270	1724	102	286	117	97	177	339	491
RTOR Reduction (vph)	0	72	0	0	8	0	0	0	74	0	148	0
Lane Group Flow (vph)	250	1308	0	270	1818	0	286	117	23	177	682	0
Turn Type	Prot			Prot			Prot		Prot	Prot		
Protected Phases	7	4		3	8		5	2	2	1	6	
Permitted Phases												
Actuated Green, G (s)	7.1	28.3		8.8	30.0		8.0	18.5	18.5	6.6	17.1	
Effective Green, g (s)	7.1	28.3		8.8	30.0		8.0	18.5	18.5	6.6	17.1	
Actuated g/C Ratio	0.09	0.36		0.11	0.38		0.10	0.24	0.24	0.08	0.22	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	312	1773		386	1935		351	1203	374	290	1013	
v/s Ratio Prot	0.07	0.27		c0.08	c0.36		c0.08	0.02	0.01	0.05	c0.15	
v/s Ratio Perm												
v/c Ratio	0.80	0.74		0.70	0.94		0.81	0.10	0.06	0.61	1.00dr	
Uniform Delay, d1	34.9	21.7		33.4	23.2		34.4	23.3	23.1	34.6	28.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	13.7	1.6		5.5	9.5		13.5	0.0	0.1	3.8	1.8	
Delay (s)	48.6	23.4		38.9	32.7		47.9	23.4	23.2	38.3	29.8	
Level of Service	D	C		D	C		D	C	C	D	C	
Approach Delay (s)		27.2			33.5			37.4			31.3	
Approach LOS		C			C			D			C	

Intersection Summary				
HCM Average Control Delay	31.5	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.79			
Actuated Cycle Length (s)	78.2	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	75.0%	ICU Level of Service	D	
Analysis Period (min)	15			

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	149	627	295	272	1228	169	428	183	108	142	180	151
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	0.97	0.91		0.97	0.91		0.97	0.91		1.00	0.95	
Frt	1.00	0.95		1.00	0.98		1.00	0.94		1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	4841		3433	4993		3433	4802		1770	3297	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	4841		3433	4993		3433	4802		1770	3297	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	166	697	328	302	1364	188	476	203	120	158	200	168
RTOR Reduction (vph)	0	108	0	0	22	0	0	98	0	0	139	0
Lane Group Flow (vph)	166	917	0	302	1530	0	476	225	0	158	229	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	5.0	20.1		9.0	24.1		11.9	12.3		9.4	9.8	
Effective Green, g (s)	5.0	20.1		9.0	24.1		11.9	12.3		9.4	9.8	
Actuated g/C Ratio	0.07	0.30		0.13	0.36		0.18	0.18		0.14	0.15	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	257	1457		463	1801		612	884		249	484	
v/s Ratio Prot	0.05	0.19		c0.09	c0.31		c0.14	0.05		0.09	c0.07	
v/s Ratio Perm												
v/c Ratio	0.65	0.63		0.65	0.85		0.78	0.25		0.63	0.47	
Uniform Delay, d1	30.0	20.1		27.4	19.7		26.2	23.3		27.1	26.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	5.5	0.9		3.3	4.0		6.2	0.2		5.2	0.7	
Delay (s)	35.5	21.0		30.7	23.6		32.4	23.5		32.3	26.9	
Level of Service	D	C		C	C		C	C		C	C	
Approach Delay (s)		23.0			24.8			28.8			28.5	
Approach LOS		C			C			C			C	

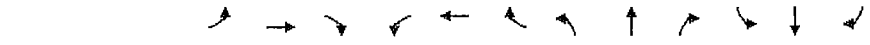
Intersection Summary				
HCM Average Control Delay	25.5	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.74			
Actuated Cycle Length (s)	66.8	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	67.1%	ICU Level of Service	C	
Analysis Period (min)	15			

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	206	644	123	79	1076	210	114	151	11	54	60	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.99		1.00	0.90	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	4963		1770	4961		1770	1844		1770	1674	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	4963		1770	4961		1770	1844		1770	1674	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	229	716	137	88	1196	233	127	168	12	60	67	139
RTOR Reduction (vph)	0	32	0	0	34	0	0	3	0	0	102	0
Lane Group Flow (vph)	229	821	0	88	1395	0	127	177	0	60	104	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	12.3	30.5		6.9	25.1		7.8	15.9		4.0	12.1	
Effective Green, g (s)	12.3	30.5		6.9	25.1		7.8	15.9		4.0	12.1	
Actuated g/C Ratio	0.17	0.42		0.09	0.34		0.11	0.22		0.05	0.17	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	297	2065		167	1699		188	400		97	276	
v/s Ratio Prot	c0.13	0.17		0.05	c0.28		c0.07	c0.10		0.03	0.06	
v/s Ratio Perm												
v/c Ratio	0.77	0.40		0.53	0.82		0.68	0.44		0.62	0.38	
Uniform Delay, d1	29.2	15.0		31.6	22.0		31.5	24.9		33.9	27.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	11.7	0.1		3.0	3.3		9.2	0.8		11.2	0.9	
Delay (s)	40.8	15.1		34.6	25.4		40.8	25.6		45.1	28.1	
Level of Service	D	B		C	C		D	C		D	C	
Approach Delay (s)		20.6			25.9			31.9			31.9	
Approach LOS		C			C			C			C	

Intersection Summary				
HCM Average Control Delay	25.2	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.71			
Actuated Cycle Length (s)	73.3	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	67.4%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	156	560	34	65	1114	35	43	25	53	48	58	353
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	1.00		1.00	0.90		1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5041		1770	5062		1770	1673		1770	1623	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	5041		1770	5062		1770	1673		1770	1623	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	173	622	38	72	1238	39	48	28	59	53	64	392
RTOR Reduction (vph)	0	7	0	0	4	0	0	49	0	0	260	0
Lane Group Flow (vph)	173	653	0	72	1273	0	48	38	0	53	196	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	10.1	29.3		4.3	23.5		2.4	11.1		3.4	12.1	
Effective Green, g (s)	10.1	29.3		4.3	23.5		2.4	11.1		3.4	12.1	
Actuated g/C Ratio	0.16	0.46		0.07	0.37		0.04	0.17		0.05	0.19	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	279	2304		119	1856		66	290		94	306	
v/s Ratio Prot	c0.10	0.13		0.04	c0.25		0.03	0.02		c0.03	c0.12	
v/s Ratio Perm												
v/c Ratio	0.62	0.28		0.61	0.69		0.73	0.13		0.56	0.64	
Uniform Delay, d1	25.2	10.9		29.1	17.2		30.5	22.4		29.6	24.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.2	0.1		8.4	1.1		32.6	0.2		7.5	4.3	
Delay (s)	29.4	10.9		37.5	18.2		63.2	22.6		37.2	28.3	
Level of Service	C	B		D	B		E	C		D	C	
Approach Delay (s)		14.8			19.3			37.0			29.2	
Approach LOS		B			B			D			C	

Intersection Summary				
HCM Average Control Delay	20.6	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.61			
Actuated Cycle Length (s)	64.1	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	72.4%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	551	125	385	995	267	332
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.91		1.00	0.91	0.97	1.00
Frt	0.97		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	4944		1770	5085	3433	1583
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	4944		1770	5085	3433	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	612	139	428	1106	297	369
RTOR Reduction (vph)	62	0	0	0	0	294
Lane Group Flow (vph)	689	0	428	1106	297	75
Turn Type			Prot			Prot
Protected Phases	4		3	8	2	2
Permitted Phases						
Actuated Green, G (s)	13.6		15.2	32.8	10.4	10.4
Effective Green, g (s)	13.6		15.2	32.8	10.4	10.4
Actuated g/C Ratio	0.27		0.30	0.64	0.20	0.20
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1313		525	3258	697	322
v/s Ratio Prot	c0.14		c0.24	0.22	c0.09	0.05
v/s Ratio Perm						
v/c Ratio	0.52		0.82	0.34	0.43	0.23
Uniform Delay, d1	16.0		16.7	4.2	17.8	17.1
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4		9.5	0.1	0.4	0.4
Delay (s)	16.4		26.2	4.3	18.2	17.4
Level of Service	B		C	A	B	B
Approach Delay (s)	16.4			10.4	17.8	
Approach LOS	B			B	B	

Intersection Summary				
HCM Average Control Delay	13.6	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.61			
Actuated Cycle Length (s)	51.2	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	52.4%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	42	8	8	94	28	107	138	310	98	168	626	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.95	0.95			1.00	1.00	0.97	0.91		0.97	0.91	1.00
Frt	1.00	0.96			1.00	0.85	1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	0.98			0.96	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1659			1794	1583	3433	4902		3433	5085	1583
Flt Permitted	0.38	0.33			0.96	1.00	0.38	1.00		0.95	1.00	1.00
Satd. Flow (perm)	681	560			1794	1583	1357	4902		3433	5085	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	47	9	9	104	31	119	153	344	109	187	696	61
RTOR Reduction (vph)	0	7	0	0	0	102	0	70	0	0	0	34
Lane Group Flow (vph)	32	26	0	0	135	17	153	383	0	187	696	27
Turn Type	Perm			Split		Perm	Perm			Prot		Perm
Protected Phases		2		6	6			8		7	4	
Permitted Phases	2					6	8					4
Actuated Green, G (s)	10.4	10.4			7.8	7.8	12.7	12.7		7.0	23.7	23.7
Effective Green, g (s)	10.4	10.4			7.8	7.8	12.7	12.7		7.0	23.7	23.7
Actuated g/C Ratio	0.19	0.19			0.14	0.14	0.24	0.24		0.13	0.44	0.44
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	131	108			260	229	320	1155		446	2236	696
v/s Ratio Prot					c0.08			0.08		c0.05	0.14	
v/s Ratio Perm	c0.05	0.05				0.01	c0.11					0.02
v/c Ratio	0.24	0.24			0.52	0.08	0.48	0.33		0.42	0.31	0.04
Uniform Delay, d1	18.4	18.4			21.3	19.9	17.7	17.1		21.6	9.8	8.6
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1.0	1.1			1.8	0.1	1.1	0.2		0.6	0.1	0.0
Delay (s)	19.4	19.5			23.1	20.1	18.9	17.3		22.2	9.9	8.6
Level of Service	B	B			C	C	B	B		C	A	A
Approach Delay (s)		19.5			21.7			17.7			12.2	
Approach LOS		B			C			B			B	

Intersection Summary				
HCM Average Control Delay	15.5	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.41			
Actuated Cycle Length (s)	53.9	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	39.4%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	168	83	113	45	189	149	111	438	7	100	455	168
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.93		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1739		1770	3531		1770	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	1863	1583	1770	1739		1770	3531		1770	3539	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	187	92	126	50	210	166	123	487	8	111	506	187
RTOR Reduction (vph)	0	0	77	0	36	0	0	2	0	0	0	145
Lane Group Flow (vph)	187	92	49	50	340	0	123	493	0	111	506	42
Turn Type	Prot		Prot	Prot			Prot			Prot		Prot
Protected Phases	7	4	4	3	8		5	2		1	6	6
Permitted Phases												
Actuated Green, G (s)	12.1	26.4	26.4	3.5	17.8		7.1	16.3		6.1	15.3	15.3
Effective Green, g (s)	12.1	26.4	26.4	3.5	17.8		7.1	16.3		6.1	15.3	15.3
Actuated g/C Ratio	0.18	0.39	0.39	0.05	0.26		0.10	0.24		0.09	0.22	0.22
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	314	720	612	91	453		184	843		158	793	355
v/s Ratio Prot	c0.11	0.05	0.03	0.03	c0.20		c0.07	0.14		0.06	c0.14	0.03
v/s Ratio Perm												
v/c Ratio	0.60	0.13	0.08	0.55	0.75		0.67	0.59		0.70	0.64	0.12
Uniform Delay, d1	25.8	13.5	13.3	31.6	23.2		29.5	23.0		30.2	24.0	21.1
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	3.0	0.1	0.1	6.6	6.9		8.9	1.0		13.2	1.7	0.1
Delay (s)	28.9	13.6	13.3	38.3	30.1		38.3	24.1		43.4	25.7	21.3
Level of Service	C	B	B	D	C		D	C		D	C	C
Approach Delay (s)		20.6			31.0			26.9			27.1	
Approach LOS		C			C			C			C	

Intersection Summary				
HCM Average Control Delay	26.6	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.67			
Actuated Cycle Length (s)	68.3	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	60.4%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	38	67	6	226	45	141	14	325	52	151	472	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.91		1.00	0.91	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1839		1770	1863	1583	1770	4980		1770	4992	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1839		1770	1863	1583	1770	4980		1770	4992	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	42	74	7	251	50	157	16	361	58	168	524	73
RTOR Reduction (vph)	0	5	0	0	0	114	0	31	0	0	22	0
Lane Group Flow (vph)	42	76	0	251	50	43	16	388	0	168	575	0
Turn Type	Prot			Prot		Prot	Prot			Prot		
Protected Phases	1	6		5	2	2	7	4		3	8	
Permitted Phases												
Actuated Green, G (s)	2.0	5.4		11.6	15.0	15.0	0.7	13.2		8.3	20.8	
Effective Green, g (s)	2.0	5.4		11.6	15.0	15.0	0.7	13.2		8.3	20.8	
Actuated g/C Ratio	0.04	0.10		0.21	0.28	0.28	0.01	0.24		0.15	0.38	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	65	182		377	513	436	23	1206		270	1905	
v/s Ratio Prot	0.02	c0.04		c0.14	0.03	0.03	0.01	0.08		c0.09	c0.12	
v/s Ratio Perm												
v/c Ratio	0.65	0.42		0.67	0.10	0.10	0.70	0.32		0.62	0.30	
Uniform Delay, d1	25.9	23.1		19.7	14.7	14.7	26.8	17.0		21.6	11.8	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	20.0	1.5		4.4	0.1	0.1	63.9	0.2		4.4	0.1	
Delay (s)	45.9	24.6		24.1	14.8	14.8	90.7	17.1		26.0	11.9	
Level of Service	D	C		C	B	B	F	B		C	B	
Approach Delay (s)		31.9			19.9			19.8			15.0	
Approach LOS		C			B			B			B	

Intersection Summary				
HCM Average Control Delay	18.6	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.47			
Actuated Cycle Length (s)	54.5	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	45.0%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	307	118	123	60	291	29	269	418	28	66	406	390
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85		0.99		1.00	0.99		1.00	0.93	
Flt Protected	0.95	1.00	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583		1829		1770	3506		1770	3279	
Flt Permitted	0.95	1.00	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1583		1829		1770	3506		1770	3279	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	323	124	129	63	306	31	283	440	29	69	427	411
RTOR Reduction (vph)	0	0	103	0	4	0	0	6	0	0	216	0
Lane Group Flow (vph)	323	124	26	0	396	0	283	463	0	69	622	0
Turn Type	Split		Prot	Split			Prot			Prot		
Protected Phases	4	4	4	8	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	16.1	16.1	16.1		17.4		13.2	24.2		6.6	17.6	
Effective Green, g (s)	16.1	16.1	16.1		17.4		13.2	24.2		6.6	17.6	
Actuated g/C Ratio	0.20	0.20	0.20		0.22		0.16	0.30		0.08	0.22	
Clearance Time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	355	374	317		396		291	1057		145	719	
v/s Ratio Prot	c0.18	0.07	0.02		c0.22		c0.16	0.13		0.04	c0.19	
v/s Ratio Perm												
v/c Ratio	0.91	0.33	0.08		1.00		0.97	0.44		0.48	0.87	
Uniform Delay, d1	31.4	27.5	26.1		31.4		33.4	22.6		35.2	30.2	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	26.1	0.5	0.1		45.3		45.0	0.3		2.5	10.7	
Delay (s)	57.5	28.0	26.2		76.7		78.3	22.9		37.7	40.9	
Level of Service	E	C	C		E		E	C		D	D	
Approach Delay (s)		44.2			76.7			43.7			40.6	
Approach LOS		D			E			D			D	

Intersection Summary				
HCM Average Control Delay	47.8	HCM Level of Service	D	
HCM Volume to Capacity ratio	0.94			
Actuated Cycle Length (s)	80.3	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	89.4%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	EBL	EBR	EBR2	NWL2	NWL	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	30	110	245	94	221	100	212	325	29	79	885	107
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.97		0.97	0.91		1.00	0.91	
Frt	1.00	0.85	0.85	1.00	0.95		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1583	1583	1770	3330		3433	5023		1770	5003	
Flt Permitted	0.95	1.00	1.00	0.95	0.97		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1583	1583	1770	3330		3433	5023		1770	5003	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	33	122	272	104	246	111	236	361	32	88	983	119
RTOR Reduction (vph)	0	0	199	0	91	0	0	17	0	0	25	0
Lane Group Flow (vph)	33	122	73	104	266	0	236	376	0	88	1077	0
Turn Type		Perm	Perm	Split			Prot			Prot		
Protected Phases	2			6	6		3	8		7	4	
Permitted Phases		2	2									
Actuated Green, G (s)	16.1	16.1	16.1	5.8	5.8		5.0	16.4		5.7	17.1	
Effective Green, g (s)	16.1	16.1	16.1	5.8	5.8		5.0	16.4		5.7	17.1	
Actuated g/C Ratio	0.27	0.27	0.27	0.10	0.10		0.08	0.27		0.10	0.29	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	475	425	425	171	322		286	1373		168	1426	
v/s Ratio Prot	0.02			0.06	c0.08		c0.07	0.07		0.05	c0.22	
v/s Ratio Perm		c0.08	0.05									
v/c Ratio	0.07	0.29	0.17	0.61	0.83		0.83	0.27		0.52	0.76	
Uniform Delay, d1	16.4	17.4	16.8	26.0	26.6		27.1	17.1		25.9	19.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	1.7	0.9	6.0	15.7		17.3	0.1		2.9	2.3	
Delay (s)	16.6	19.1	17.7	32.0	42.3		44.4	17.2		28.8	21.9	
Level of Service	B	B	B	C	D		D	B		C	C	
Approach Delay (s)	18.0				40.0			27.4			22.4	
Approach LOS	B				D			C			C	

Intersection Summary				
HCM Average Control Delay	25.9	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.55			
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	51.6%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	50	6	71	13	26	14	123	30	2	3	16	193
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	56	7	79	14	29	16	137	33	2	3	18	214

Direction, Lane #	SE 1	SE 2	NW 1	NE 1	SW 1
Volume Total (vph)	62	79	59	172	236
Volume Left (vph)	56	0	14	137	3
Volume Right (vph)	0	79	16	2	214
Hadj (s)	0.48	-0.67	-0.08	0.18	-0.51
Departure Headway (s)	6.0	4.8	5.1	4.9	4.1
Degree Utilization, x	0.10	0.11	0.08	0.23	0.27
Capacity (veh/h)	559	687	641	704	824
Control Delay (s)	8.5	7.2	8.5	9.3	8.6
Approach Delay (s)	7.8		8.5	9.3	8.6
Approach LOS	A		A	A	A

Intersection Summary				
Delay	8.6			
HCM Level of Service	A			
Intersection Capacity Utilization	41.1%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	52	89	116	199	61	24	30	292	81	15	764	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85		0.99		1.00	0.97		1.00	0.98	
Flt Protected		0.98	1.00		0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1829	1583		1779		1770	3424		1770	3457	
Flt Permitted		0.98	1.00		0.97		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1829	1583		1779		1770	3424		1770	3457	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	58	99	129	221	68	27	33	324	90	17	849	156
RTOR Reduction (vph)	0	0	107	0	5	0	0	31	0	0	19	0
Lane Group Flow (vph)	0	157	22	0	311	0	33	383	0	17	986	0
Turn Type	Split		Prot	Split			Prot			Prot		
Protected Phases	4	4	4	8	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)		10.7	10.7		14.4		1.5	21.5		0.7	20.7	
Effective Green, g (s)		10.7	10.7		14.4		1.5	21.5		0.7	20.7	
Actuated g/C Ratio		0.17	0.17		0.23		0.02	0.34		0.01	0.33	
Clearance Time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		309	268		405		42	1163		20	1130	
v/s Ratio Prot		c0.09	0.01		c0.18		c0.02	0.11		0.01	c0.29	
v/s Ratio Perm												
v/c Ratio		0.51	0.08		0.77		0.79	0.33		0.85	0.87	
Uniform Delay, d1		23.9	22.2		22.9		30.7	15.5		31.2	20.1	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.3	0.1		8.5		62.3	0.2		131.5	7.6	
Delay (s)		25.2	22.3		31.4		93.0	15.7		162.7	27.7	
Level of Service		C	C		C		F	B		F	C	
Approach Delay (s)		23.9			31.4			21.4			29.9	
Approach LOS		C			C			C			C	

Intersection Summary				
HCM Average Control Delay	27.5	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.76			
Actuated Cycle Length (s)	63.3	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	58.5%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱		↰↰	↑↑					↰	↱	↱
Volume (vph)	0	304	176	382	621	0	0	0	0	997	3	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		0.97	0.95					0.95	0.91	0.95
Frt		0.94		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.95	1.00
Satd. Flow (prot)		3344		3433	3539					1681	1610	1504
Flt Permitted		1.00		0.95	1.00					0.95	0.95	1.00
Satd. Flow (perm)		3344		3433	3539					1681	1610	1504
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	338	196	424	690	0	0	0	0	1108	3	160
RTOR Reduction (vph)	0	135	0	0	0	0	0	0	0	0	2	84
Lane Group Flow (vph)	0	399	0	424	690	0	0	0	0	565	560	60
Turn Type				Prot						Split		Prot
Protected Phases		4		3	8					6	6	6
Permitted Phases												
Actuated Green, G (s)		12.3		9.9	26.2					24.7	24.7	24.7
Effective Green, g (s)		12.3		9.9	26.2					24.7	24.7	24.7
Actuated g/C Ratio		0.21		0.17	0.44					0.42	0.42	0.42
Clearance Time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		698		577	1574					705	675	631
v/s Ratio Prot		c0.12		c0.12	0.19					0.34	c0.35	0.04
v/s Ratio Perm												
v/c Ratio		0.57		0.73	0.44					0.80	0.83	0.10
Uniform Delay, d1		20.9		23.3	11.3					15.0	15.2	10.3
Progression Factor		1.00		1.00	1.00					1.00	1.00	1.00
Incremental Delay, d2		1.1		4.8	0.2					6.5	8.5	0.1
Delay (s)		22.1		28.1	11.5					21.5	23.8	10.4
Level of Service		C		C	B					C	C	B
Approach Delay (s)		22.1			17.8			0.0			21.2	
Approach LOS		C			B			A			C	

Intersection Summary				
HCM Average Control Delay	20.1	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.74			
Actuated Cycle Length (s)	58.9	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	73.6%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑			↑↑	↱	↰	↱	↱			
Volume (vph)	61	1185	0	0	931	834	106	2	547	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	0.97	0.95			0.95	1.00	0.95	0.91	0.95			
Frt	1.00	1.00			1.00	0.85	1.00	0.86	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (prot)	3433	3539			3539	1583	1681	1449	1504			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (perm)	3433	3539			3539	1583	1681	1449	1504			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	68	1317	0	0	1034	927	118	2	608	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	494	0	37	37	0	0	0
Lane Group Flow (vph)	68	1317	0	0	1034	433	106	275	273	0	0	0
Turn Type	Prot					Prot	Split		Prot			
Protected Phases	7	4			8	8	2	2	2			
Permitted Phases												
Actuated Green, G (s)	2.4	31.6			25.2	25.2	14.4	14.4	14.4			
Effective Green, g (s)	2.4	31.6			25.2	25.2	14.4	14.4	14.4			
Actuated g/C Ratio	0.04	0.59			0.47	0.47	0.27	0.27	0.27			
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0			
Lane Grp Cap (vph)	153	2071			1652	739	448	386	401			
v/s Ratio Prot	0.02	c0.37			0.29	0.27	0.06	c0.19	0.18			
v/s Ratio Perm												
v/c Ratio	0.44	0.64			0.63	0.59	0.24	0.71	0.68			
Uniform Delay, d1	25.2	7.4			10.8	10.6	15.5	17.9	17.7			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	2.1	0.6			0.7	1.2	0.3	6.1	4.5			
Delay (s)	27.2	8.0			11.6	11.8	15.8	24.0	22.3			
Level of Service	C	A			B	B	B	C	C			
Approach Delay (s)		9.0			11.7			22.1			0.0	
Approach LOS		A			B			C			A	

Intersection Summary				
HCM Average Control Delay	12.6	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.66			
Actuated Cycle Length (s)	54.0	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	73.6%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	6	16	704	14	161	69	912	145	119	1058	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.95	0.91	0.95	0.95	0.91	0.95	1.00	0.91		1.00	0.91	
Frt	1.00	0.97	0.85	1.00	0.99	0.85	1.00	0.98		1.00	1.00	
Flt Protected	0.95	0.98	1.00	0.95	0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1681	1617	1504	1681	1610	1504	1770	4981		1770	5073	
Flt Permitted	0.95	0.98	1.00	0.95	0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1681	1617	1504	1681	1610	1504	1770	4981		1770	5073	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	22	7	18	782	16	179	77	1013	161	132	1176	19
RTOR Reduction (vph)	0	3	14	0	2	107	0	21	0	0	1	0
Lane Group Flow (vph)	16	13	1	407	407	54	77	1153	0	132	1194	0
Turn Type	Split		Prot	Split		Prot	Prot			Prot		
Protected Phases	4	4	4	8	8	8	5	2!		6!		
Permitted Phases											6	
Actuated Green, G (s)	3.6	3.6	3.6	23.8	23.8	23.8	4.4	32.1		23.7	23.7	
Effective Green, g (s)	3.6	3.6	3.6	23.8	23.8	23.8	4.4	32.1		23.7	23.7	
Actuated g/C Ratio	0.05	0.05	0.05	0.33	0.33	0.33	0.06	0.45		0.33	0.33	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	85	81	76	560	536	501	109	2236		587	1682	
v/s Ratio Prot	c0.01	0.01	0.00	0.24	c0.25	0.04	c0.04	0.23		0.07		
v/s Ratio Perm											c0.24	
v/c Ratio	0.19	0.16	0.01	0.73	0.76	0.11	0.71	0.52		0.22	0.71	
Uniform Delay, d1	32.5	32.5	32.3	21.0	21.3	16.5	32.9	14.1		17.3	20.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.1	0.9	0.1	4.7	6.1	0.1	18.8	0.2		0.2	1.4	
Delay (s)	33.6	33.5	32.3	25.7	27.4	16.6	51.7	14.3		17.5	22.3	
Level of Service	C	C	C	C	C	B	D	B		B	C	
Approach Delay (s)		33.1			24.9			16.6			21.8	
Approach LOS		C			C			B			C	

Intersection Summary				
HCM Average Control Delay	21.0	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.70			
Actuated Cycle Length (s)	71.5	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	65.6%	ICU Level of Service	C	
Analysis Period (min)	15			

! Phase conflict between lane groups.
c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	308	1008	200	147	825	0	0	555	635
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0	4.0	4.0	4.0	4.0			4.0	4.0
Lane Util. Factor				0.97	0.91	1.00	0.97	0.95			0.86	0.86
Frpb, ped/bikes				1.00	1.00	1.00	1.00	1.00			0.92	1.00
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00			1.00	1.00
Frt				1.00	1.00	0.85	1.00	1.00			0.95	0.85
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				3433	5085	1583	3433	3539			4189	1362
Flt Permitted				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)				3433	5085	1583	3433	3539			4189	1362
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	342	1120	222	163	917	0	0	617	706
RTOR Reduction (vph)	0	0	0	0	0	88	0	0	0	0	22	22
Lane Group Flow (vph)	0	0	0	342	1120	134	163	917	0	0	948	331
Confl. Peds. (#/hr)												200
Turn Type				Prot		Perm	Prot					Prot
Protected Phases				3	8		5	2			6	6
Permitted Phases						8						
Actuated Green, G (s)				17.4	17.4	17.4	4.4	29.6			21.2	21.2
Effective Green, g (s)				17.4	17.4	17.4	4.4	29.6			21.2	21.2
Actuated g/C Ratio				0.32	0.32	0.32	0.08	0.54			0.39	0.39
Clearance Time (s)				4.0	4.0	4.0	4.0	4.0			4.0	4.0
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)				1086	1609	501	275	1905			1615	525
v/s Ratio Prot				0.10	c0.22		0.05	c0.26			0.23	c0.24
v/s Ratio Perm						0.08						
v/c Ratio				0.31	0.70	0.27	0.59	0.48			0.59	0.63
Uniform Delay, d1				14.3	16.5	14.0	24.4	7.9			13.4	13.7
Progression Factor				1.00	1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2				0.2	1.3	0.3	3.4	0.2			0.5	2.5
Delay (s)				14.4	17.8	14.3	27.8	8.1			14.0	16.2
Level of Service				B	B	B	C	A			B	B
Approach Delay (s)		0.0			16.7			11.1			14.6	
Approach LOS		A			B			B			B	

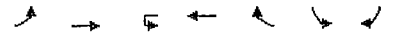
Intersection Summary				
HCM Average Control Delay	14.5	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.66			
Actuated Cycle Length (s)	55.0	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	95.9%	ICU Level of Service	F	
Analysis Period (min)	15			

c Critical Lane Group



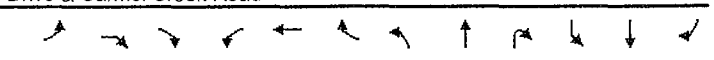
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	589	896	265	0	0	0	0	364	192	117	682	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Lane Util. Factor	0.91	0.86	0.91					0.86		1.00	0.91	
Frt	1.00	1.00	0.85					0.95		1.00	1.00	
Flt Protected	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	1610	3176	1441					6076		1770	5085	
Flt Permitted	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	1610	3176	1441					6076		1770	5085	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	654	996	294	0	0	0	0	404	213	130	758	0
RTOR Reduction (vph)	0	3	70	0	0	0	0	54	0	0	0	0
Lane Group Flow (vph)	543	1133	195	0	0	0	0	563	0	130	758	0
Turn Type	Split		Prot							Prot		
Protected Phases	4	4	4					2		1	6	
Permitted Phases												
Actuated Green, G (s)	23.7	23.7	23.7					11.8		4.5	20.3	
Effective Green, g (s)	23.7	23.7	23.7					11.8		4.5	20.3	
Actuated g/C Ratio	0.46	0.46	0.46					0.23		0.09	0.39	
Clearance Time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	734	1448	657					1379		153	1985	
v/s Ratio Prot	0.34	c0.36	0.14					0.09		c0.07	c0.15	
v/s Ratio Perm												
v/c Ratio	0.74	0.78	0.30					0.41		0.85	0.38	
Uniform Delay, d1	11.6	12.0	8.9					17.1		23.4	11.4	
Progression Factor	1.00	1.00	1.00					1.00		1.00	1.00	
Incremental Delay, d2	3.9	2.8	0.3					0.2		33.2	0.1	
Delay (s)	15.5	14.8	9.2					17.3		56.6	11.5	
Level of Service	B	B	A					B		E	B	
Approach Delay (s)		14.2			0.0			17.3			18.1	
Approach LOS		B			A			B			B	

Intersection Summary				
HCM Average Control Delay	15.8	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.63			
Actuated Cycle Length (s)	52.0	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	95.9%	ICU Level of Service	F	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Volume (vph)	16	210	0	427	24	94	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		0.95		1.00	1.00
Frt	1.00	1.00		0.99		1.00	0.85
Flt Protected	0.95	1.00		1.00		0.95	1.00
Satd. Flow (prot)	1770	3539		3511		1770	1583
Flt Permitted	0.95	1.00		1.00		0.95	1.00
Satd. Flow (perm)	1770	3539		3511		1770	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	18	233	0	474	27	104	124
RTOR Reduction (vph)	0	0	0	8	0	0	105
Lane Group Flow (vph)	18	233	0	493	0	104	19
Turn Type	Prot		Prot				Prot
Protected Phases	7	4	3	8		6	6
Permitted Phases							
Actuated Green, G (s)	0.5	12.7		8.2		3.8	3.8
Effective Green, g (s)	0.5	12.7		8.2		3.8	3.8
Actuated g/C Ratio	0.02	0.52		0.33		0.16	0.16
Clearance Time (s)	4.0	4.0		4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0		3.0	3.0
Lane Grp Cap (vph)	36	1835		1175		275	246
v/s Ratio Prot	0.01	c0.07		c0.14		c0.06	0.01
v/s Ratio Perm							
v/c Ratio	0.50	0.13		0.42		0.38	0.08
Uniform Delay, d1	11.9	3.0		6.3		9.3	8.9
Progression Factor	1.00	1.00		1.00		1.00	1.00
Incremental Delay, d2	10.5	0.0		0.2		0.9	0.1
Delay (s)	22.4	3.1		6.6		10.2	9.0
Level of Service	C	A		A		B	A
Approach Delay (s)		4.5		6.6		9.5	
Approach LOS		A		A		A	

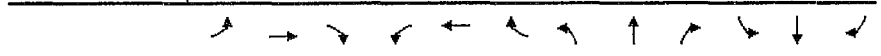
Intersection Summary			
HCM Average Control Delay	6.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	24.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	26.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	EBR2	WBL	WBT	WBR	NBL	NBT	NBR2	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	74	214	142	157	362	97	316	327	209	1070	189	201
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.88	1.00	1.00	1.00		1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.85	0.85	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	2787	1583	1770	1804		1770	3539	1583	3433	3539	1583
Flt Permitted	0.31	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	577	2787	1583	1770	1804		1770	3539	1583	3433	3539	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	82	238	158	174	402	108	351	363	232	1189	210	223
RTOR Reduction (vph)	0	0	130	0	11	0	0	0	193	0	0	162
Lane Group Flow (vph)	82	238	28	174	499	0	351	363	39	1189	210	61
Turn Type	custom	custom	custom	Prot			Prot		Prot	Prot		Prot
Protected Phases				3	8		5	2	2	1	6	6
Permitted Phases	4	4	4									
Actuated Green, G (s)	15.3	15.3	15.3	9.4	28.7		21.9	14.4	14.4	31.1	23.6	23.6
Effective Green, g (s)	15.3	15.3	15.3	9.4	28.7		21.9	14.4	14.4	31.1	23.6	23.6
Actuated g/C Ratio	0.18	0.18	0.18	0.11	0.33		0.25	0.17	0.17	0.36	0.27	0.27
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	102	495	281	193	601		450	591	264	1239	969	433
v/s Ratio Prot				0.10	c0.28		0.20	c0.10	0.02	c0.35	0.06	0.04
v/s Ratio Perm	0.14	0.09	0.02									
v/c Ratio	0.80	0.48	0.10	0.90	0.83		0.78	0.61	0.15	0.96	0.22	0.14
Uniform Delay, d1	34.0	31.9	29.7	37.9	26.5		29.9	33.3	30.7	26.9	24.2	23.6
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	35.2	0.7	0.2	38.4	9.5		8.5	1.9	0.3	16.6	0.1	0.2
Delay (s)	69.2	32.6	29.8	76.4	36.0		38.4	35.2	30.9	43.5	24.3	23.8
Level of Service	E	C	C	E	D		D	D	C	D	C	C
Approach Delay (s)					46.3			35.4			38.3	
Approach LOS					D			D			D	

Intersection Summary				
HCM Average Control Delay	39.0	HCM Level of Service	D	
HCM Volume to Capacity ratio	0.84			
Actuated Cycle Length (s)	86.2	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	81.9%	ICU Level of Service	D	
Analysis Period (min)	15			

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	437	0	180	0	0	0	0	412	74	183	275	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95	1.00					0.95		0.97	0.95	
Frt	1.00	1.00	0.85					0.98		1.00	1.00	
Flt Protected	0.95	0.95	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	1681	1681	1583					3459		3433	3539	
Flt Permitted	0.95	0.95	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	1681	1681	1583					3459		3433	3539	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	486	0	200	0	0	0	0	458	82	203	306	0
RTOR Reduction (vph)	0	0	139	0	0	0	0	31	0	0	0	0
Lane Group Flow (vph)	243	243	61	0	0	0	0	509	0	203	306	0
Turn Type	Split		Prot							Prot		
Protected Phases	4	4	4					2		1	6	
Permitted Phases												
Actuated Green, G (s)	12.2	12.2	12.2					12.0		3.6	19.6	
Effective Green, g (s)	12.2	12.2	12.2					12.0		3.6	19.6	
Actuated g/C Ratio	0.31	0.31	0.31					0.30		0.09	0.49	
Clearance Time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	515	515	485					1043		311	1743	
v/s Ratio Prot	c0.14	0.14	0.04					c0.15		c0.06	0.09	
v/s Ratio Perm												
v/c Ratio	0.47	0.47	0.13					0.49		0.65	0.18	
Uniform Delay, d1	11.2	11.2	10.0					11.4		17.5	5.6	
Progression Factor	1.00	1.00	1.00					1.00		1.00	1.00	
Incremental Delay, d2	0.7	0.7	0.1					0.4		4.9	0.0	
Delay (s)	11.9	11.9	10.1					11.7		22.3	5.7	
Level of Service	B	B	B					B		C	A	
Approach Delay (s)		11.3			0.0			11.7			12.3	
Approach LOS		B			A			B			B	

Intersection Summary				
HCM Average Control Delay	11.8	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.50			
Actuated Cycle Length (s)	39.8	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	41.1%	ICU Level of Service	A	
Analysis Period (min)	15			

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	86	497	36	141	459	335	57	64	236	623	139	178
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		0.97	1.00	
Frt	1.00	0.99		1.00	0.94		1.00	0.88		1.00	0.92	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3503		1770	3315		1770	1643		3433	1706	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3503		1770	3315		1770	1643		3433	1706	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	96	552	40	157	510	372	63	71	262	692	154	198
RTOR Reduction (vph)	0	6	0	0	134	0	0	151	0	0	49	0
Lane Group Flow (vph)	96	586	0	157	748	0	63	182	0	692	303	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												
Actuated Green, G (s)	8.1	19.5		12.1	23.5		6.7	13.5		19.1	25.9	
Effective Green, g (s)	8.1	19.5		12.1	23.5		6.7	13.5		19.1	25.9	
Actuated g/C Ratio	0.10	0.24		0.15	0.29		0.08	0.17		0.24	0.32	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	179	852		267	971		148	277		818	551	
v/s Ratio Prot	0.05	0.17		c0.09	c0.23		0.04	c0.11		c0.20	0.18	
v/s Ratio Perm												
v/c Ratio	0.54	0.69		0.59	0.77		0.43	0.66		0.85	0.55	
Uniform Delay, d1	34.3	27.6		31.7	25.9		34.9	31.2		29.1	22.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	3.1	2.3		3.3	3.8		2.0	5.6		8.1	1.2	
Delay (s)	37.3	29.9		35.0	29.7		36.9	36.8		37.2	23.5	
Level of Service	D	C		D	C		D	D		D	C	
Approach Delay (s)		30.9			30.5			36.8			32.6	
Approach LOS		C			C			D			C	

Intersection Summary				
HCM Average Control Delay	32.1	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.76			
Actuated Cycle Length (s)	80.2	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	77.2%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	WBL	WBR	SEL	SET	NWT	NWR	NWR2	SWL	SWR
Lane Configurations									
Volume (vph)	0	0	754	580	742	0	306	133	227
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor			0.97	0.95	0.95		1.00	0.97	1.00
Frt			1.00	1.00	1.00		0.85	1.00	0.85
Flt Protected			0.95	1.00	1.00		1.00	0.95	1.00
Satd. Flow (prot)			3433	3539	3539		1583	3433	1583
Flt Permitted			0.95	1.00	1.00		1.00	0.95	1.00
Satd. Flow (perm)			3433	3539	3539		1583	3433	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	838	644	824	0	340	148	252
RTOR Reduction (vph)	0	0	0	0	0	0	230	0	215
Lane Group Flow (vph)	0	0	838	644	824	0	110	148	37
Turn Type			Prot				Perm		Perm
Protected Phases			5	2	6			4	
Permitted Phases							6		4
Actuated Green, G (s)			17.2	39.0	17.8		17.8	8.1	8.1
Effective Green, g (s)			17.2	39.0	17.8		17.8	8.1	8.1
Actuated g/C Ratio			0.31	0.71	0.32		0.32	0.15	0.15
Clearance Time (s)			4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)			3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)			1072	2505	1143		511	505	233
v/s Ratio Prot			c0.24	0.18	c0.23			c0.04	
v/s Ratio Perm							0.07		0.02
v/c Ratio			0.78	0.26	0.72		0.21	0.29	0.16
Uniform Delay, d1			17.2	2.9	16.5		13.6	20.9	20.5
Progression Factor			1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2			3.8	0.1	2.3		0.2	0.3	0.3
Delay (s)			21.0	2.9	18.7		13.8	21.3	20.8
Level of Service			C	A	B		B	C	C
Approach Delay (s)	0.0			13.2	17.3			21.0	
Approach LOS	A			B	B			C	

Intersection Summary				
HCM Average Control Delay	15.8	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.66			
Actuated Cycle Length (s)	55.1	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	55.8%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL2	EBL	EBR	SEL	SET	SER	NWL	NWT	NWR	SWL	SWR
Lane Configurations											
Volume (vph)	300	0	161	343	370	0	0	723	214	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		
Lane Util. Factor	0.95	0.95	1.00	0.97	0.95			0.95	1.00		
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		
Flt Protected	0.95	0.95	1.00	0.95	1.00			1.00	1.00		
Satd. Flow (prot)	1681	1681	1583	3433	3539			3539	1583		
Flt Permitted	0.95	0.95	1.00	0.95	1.00			1.00	1.00		
Satd. Flow (perm)	1681	1681	1583	3433	3539			3539	1583		
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	333	0	179	381	411	0	0	803	238	0	0
RTOR Reduction (vph)	0	0	141	0	0	0	0	0	156	0	0
Lane Group Flow (vph)	166	167	38	381	411	0	0	803	82	0	0
Turn Type	Split		Prot	Prot					Prot		
Protected Phases	4	4	4	1	6			2	2		
Permitted Phases											
Actuated Green, G (s)	10.1	10.1	10.1	8.9	29.3			16.4	16.4		
Effective Green, g (s)	10.1	10.1	10.1	8.9	29.3			16.4	16.4		
Actuated g/C Ratio	0.21	0.21	0.21	0.19	0.62			0.35	0.35		
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0		
Lane Grp Cap (vph)	358	358	337	645	2188			1224	548		
v/s Ratio Prot	0.10	c0.10	0.02	c0.11	0.12			c0.23	0.05		
v/s Ratio Perm											
v/c Ratio	0.46	0.47	0.11	0.59	0.19			0.66	0.15		
Uniform Delay, d1	16.3	16.3	15.0	17.6	3.9			13.1	10.7		
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00	1.00		
Incremental Delay, d2	1.0	1.0	0.1	1.5	0.0			1.3	0.1		
Delay (s)	17.2	17.3	15.2	19.0	4.0			14.4	10.8		
Level of Service	B	B	B	B	A			B	B		
Approach Delay (s)		16.5			11.2			13.6		0.0	
Approach LOS		B			B			B		A	

Intersection Summary				
HCM Average Control Delay	13.4	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.59			
Actuated Cycle Length (s)	47.4	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	48.1%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	10	10	10	200	2	25	3	265	100	15	932	3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	11	11	11	222	2	28	3	294	111	17	1036	3

Direction, Lane #	EB 1	WB 1	NE 1	NE 2	SW 1	SW 2
Volume Total (vph)	33	252	151	258	534	521
Volume Left (vph)	11	222	3	0	17	0
Volume Right (vph)	11	28	0	111	0	3
Hadj (s)	-0.10	0.14	0.05	-0.27	0.05	0.03
Departure Headway (s)	7.4	6.8	7.1	6.7	6.3	6.3
Degree Utilization, x	0.07	0.48	0.30	0.48	0.93	0.90
Capacity (veh/h)	448	513	496	520	534	565
Control Delay (s)	11.0	15.8	11.8	14.7	46.1	41.5
Approach Delay (s)	11.0	15.8	13.7		43.8	
Approach LOS	B	C	B		E	

Intersection Summary					
Delay	32.1				
HCM Level of Service	D				
Intersection Capacity Utilization	62.5%	ICU Level of Service	B		
Analysis Period (min)	15				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	6	397	501	170	363	3	538	2	405	0	2	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.95	1.00		1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1861			1774	1583		1779	
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.95	1.00		1.00	
Satd. Flow (perm)	1770	1863	1583	1770	1861			1774	1583		1779	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	7	441	557	189	403	3	598	2	450	0	2	1
RTOR Reduction (vph)	0	0	263	0	0	0	0	0	276	0	1	0
Lane Group Flow (vph)	7	441	294	189	406	0	0	600	174	0	2	0
Turn Type	Prot		Prot	Prot			Split		Prot	Split		
Protected Phases	7	4	4	3	8		2	2	2	6	6	
Permitted Phases												
Actuated Green, G (s)	0.8	29.4	29.4	12.3	40.9			37.2	37.2		1.1	
Effective Green, g (s)	0.8	29.4	29.4	12.3	40.9			37.2	37.2		1.1	
Actuated g/C Ratio	0.01	0.31	0.31	0.13	0.43			0.39	0.39		0.01	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	15	571	485	227	793			687	613		20	
v/s Ratio Prot	0.00	c0.24	0.19	c0.11	0.22			c0.34	0.11		c0.00	
v/s Ratio Perm												
v/c Ratio	0.47	0.77	0.61	0.83	0.51			0.87	0.28		0.10	
Uniform Delay, d1	47.4	30.3	28.4	40.8	20.2			27.2	20.2		47.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	21.2	6.4	2.1	22.2	0.6			11.8	0.3		2.2	
Delay (s)	68.6	36.7	30.5	63.0	20.8			39.1	20.5		49.2	
Level of Service	E	D	C	E	C			D	C		D	
Approach Delay (s)		33.5			34.2			31.1			49.2	
Approach LOS		C			C			C			D	

Intersection Summary				
HCM Average Control Delay	32.7	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.82			
Actuated Cycle Length (s)	96.0	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	76.9%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Volume (vph)	209	256	0	560	367	332	295
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00		1.00	1.00	1.00	0.95
Frt	1.00	0.85		1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00		1.00	1.00	0.95	1.00
Satd. Flow (prot)	3433	1583		1863	1583	1770	3539
Flt Permitted	0.95	1.00		1.00	1.00	0.95	1.00
Satd. Flow (perm)	3433	1583		1863	1583	1770	3539
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	232	284	0	622	408	369	328
RTOR Reduction (vph)	0	235	0	0	245	0	0
Lane Group Flow (vph)	232	49	0	622	163	369	328
Turn Type		Perm	Prot		Perm	Prot	
Protected Phases	1		3	8		7	
Permitted Phases		1			8		6
Actuated Green, G (s)	12.1	12.1		28.3	28.3	18.3	12.1
Effective Green, g (s)	12.1	12.1		28.3	28.3	18.3	12.1
Actuated g/C Ratio	0.17	0.17		0.40	0.40	0.26	0.17
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	588	271		746	634	458	606
v/s Ratio Prot	0.07			c0.33		c0.21	
v/s Ratio Perm		0.03			0.10		c0.09
v/c Ratio	0.39	0.18		0.83	0.26	0.81	0.54
Uniform Delay, d1	26.0	25.1		19.1	14.2	24.5	26.8
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.3		8.0	0.2	9.9	1.0
Delay (s)	26.5	25.4		27.0	14.4	34.5	27.8
Level of Service	C	C		C	B	C	C
Approach Delay (s)	25.9			22.0			31.3
Approach LOS	C			C			C

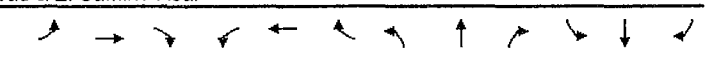
Intersection Summary				
HCM Average Control Delay	25.8	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.76			
Actuated Cycle Length (s)	70.7	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	63.8%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Volume (vph)	63	6	0	888	108	8	501
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0		4.0	4.0
Lane Util. Factor	0.97			0.95		1.00	0.95
Frt	0.99			0.98		1.00	1.00
Flt Protected	0.96			1.00		0.95	1.00
Satd. Flow (prot)	3409			3482		1770	3539
Flt Permitted	0.96			1.00		0.95	1.00
Satd. Flow (perm)	3409			3482		1770	3539
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	70	7	0	987	120	9	557
RTOR Reduction (vph)	7	0	0	13	0	0	0
Lane Group Flow (vph)	70	0	0	1094	0	9	557
Turn Type			Prot			Prot	
Protected Phases	8		5	2		1	6
Permitted Phases							
Actuated Green, G (s)	1.9			16.7		0.6	21.3
Effective Green, g (s)	1.9			16.7		0.6	21.3
Actuated g/C Ratio	0.06			0.54		0.02	0.68
Clearance Time (s)	4.0			4.0		4.0	4.0
Vehicle Extension (s)	3.0			3.0		3.0	3.0
Lane Grp Cap (vph)	208			1864		34	2416
v/s Ratio Prot	c0.02			c0.31		0.01	c0.16
v/s Ratio Perm							
v/c Ratio	0.34			0.59		0.26	0.23
Uniform Delay, d1	14.0			4.9		15.1	1.9
Progression Factor	1.00			1.00		1.00	1.00
Incremental Delay, d2	1.0			0.5		4.1	0.0
Delay (s)	15.0			5.4		19.2	1.9
Level of Service	B			A		B	A
Approach Delay (s)	15.0			5.4			2.2
Approach LOS	B			A			A

Intersection Summary			
HCM Average Control Delay	4.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	31.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	38.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

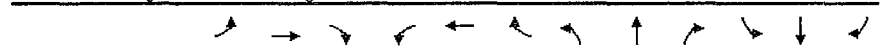
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	22	21	14	22	20	150	25	806	61	86	447	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.94		1.00	0.87		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1748		1770	1616		1770	3502		1770	3509	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1748		1770	1616		1770	3502		1770	3509	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	24	23	16	24	22	167	28	896	68	96	497	30
RTOR Reduction (vph)	0	14	0	0	148	0	0	7	0	0	5	0
Lane Group Flow (vph)	24	25	0	24	41	0	28	957	0	96	522	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	0.6	5.1		0.6	5.1		0.6	20.6		3.2	23.2	
Effective Green, g (s)	0.6	5.1		0.6	5.1		0.6	20.6		3.2	23.2	
Actuated g/C Ratio	0.01	0.11		0.01	0.11		0.01	0.45		0.07	0.51	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	23	196		23	181		23	1586		124	1789	
v/s Ratio Prot	c0.01	0.01		0.01	c0.03		0.02	c0.27		c0.05	c0.15	
v/s Ratio Perm												
v/c Ratio	1.04	0.13		1.04	0.22		1.22	0.60		0.77	0.29	
Uniform Delay, d1	22.5	18.2		22.5	18.4		22.5	9.4		20.8	6.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	201.7	0.3		201.7	0.6		261.7	0.7		25.4	0.1	
Delay (s)	224.2	18.5		224.2	19.0		284.1	10.0		46.2	6.5	
Level of Service	F	B		F	B		F	B		D	A	
Approach Delay (s)		96.8			42.1			17.8			12.6	
Approach LOS		F			D			B			B	

Intersection Summary					
HCM Average Control Delay	21.5	HCM Level of Service		C	
HCM Volume to Capacity ratio	0.62				
Actuated Cycle Length (s)	45.5	Sum of lost time (s)		20.0	
Intersection Capacity Utilization	56.0%	ICU Level of Service		B	
Analysis Period (min)	15				
c Critical Lane Group					



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	7	41	32	48	29	19	47	951	127	22	476	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.94		1.00	0.98		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1752		1770	3477		1770	3528	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1583	1770	1752		1770	3477		1770	3528	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	8	46	36	53	32	21	52	1057	141	24	529	11
RTOR Reduction (vph)	0	0	33	0	19	0	0	12	0	0	2	0
Lane Group Flow (vph)	8	46	3	53	34	0	52	1186	0	24	538	0
Turn Type	Prot		Prot	Prot			Prot			Prot		
Protected Phases	7	4	4	3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	0.6	4.1	4.1	1.3	4.8		1.7	23.0		0.6	21.9	
Effective Green, g (s)	0.6	4.1	4.1	1.3	4.8		1.7	23.0		0.6	21.9	
Actuated g/C Ratio	0.01	0.09	0.09	0.03	0.11		0.04	0.51		0.01	0.49	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	24	170	144	51	187		67	1777		24	1717	
v/s Ratio Prot	0.00	c0.02	0.00	c0.03	0.02		c0.03	c0.34		0.01	0.15	
v/s Ratio Perm												
v/c Ratio	0.33	0.27	0.02	1.04	0.18		0.78	0.67		1.00	0.31	
Uniform Delay, d1	22.0	19.1	18.6	21.8	18.3		21.5	8.2		22.2	7.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	8.0	0.9	0.1	137.6	0.5		42.0	1.0		183.7	0.1	
Delay (s)	30.0	19.9	18.7	159.4	18.8		63.4	9.1		205.9	7.1	
Level of Service	C	B	B	F	B		E	A		F	A	
Approach Delay (s)		20.3			89.1			11.4			15.6	
Approach LOS		C			F			B			B	

Intersection Summary				
HCM Average Control Delay	17.1	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.58			
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	53.0%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	124	840	16	149	913	217	40	31	63	395	35	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.95			1.00	1.00	0.95	0.95	
Frt	1.00	1.00		1.00	0.97			1.00	0.85	1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00	0.95	0.98	
Satd. Flow (prot)	1770	5071		1770	3437			1812	1583	1681	1611	
Flt Permitted	0.95	1.00		0.95	1.00			0.97	1.00	0.95	0.98	
Satd. Flow (perm)	1770	5071		1770	3437			1812	1583	1681	1611	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	138	933	18	166	1014	241	44	34	70	439	39	144
RTOR Reduction (vph)	0	2	0	0	21	0	0	0	63	0	35	0
Lane Group Flow (vph)	138	949	0	166	1234	0	0	78	7	320	267	0
Turn Type	Prot			Prot			Split		Perm	Split		
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases									2			
Actuated Green, G (s)	8.0	27.0		12.2	31.2			7.5	7.5	17.8	17.8	
Effective Green, g (s)	8.0	27.0		12.2	31.2			7.5	7.5	17.8	17.8	
Actuated g/C Ratio	0.10	0.34		0.15	0.39			0.09	0.09	0.22	0.22	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	176	1701		268	1332			169	147	372	356	
v/s Ratio Prot	c0.08	0.19		c0.09	c0.36			c0.04		c0.19	0.17	
v/s Ratio Perm									0.00			
v/c Ratio	0.78	0.56		0.62	0.93			0.46	0.04	0.86	0.75	
Uniform Delay, d1	35.4	21.9		32.0	23.5			34.6	33.2	30.2	29.3	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2	20.1	0.4		4.2	11.1			2.0	0.1	18.0	8.4	
Delay (s)	55.5	22.3		36.2	34.6			36.6	33.4	48.1	37.7	
Level of Service	E	C		D	C			D	C	D	D	
Approach Delay (s)		26.5			34.8			35.1			43.1	
Approach LOS		C			C			D			D	

Intersection Summary				
HCM Average Control Delay	33.6	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.79			
Actuated Cycle Length (s)	80.5	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	72.0%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑			↑↑		↱
Volume (veh/h)	1253	62	0	1556	0	99
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	1392	69	0	1729	0	110
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	575			607		
pX, platoon unblocked			0.87		0.74	0.87
vC, conflicting volume			1461		2291	499
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			999		976	0
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	88
cM capacity (veh/h)			598		184	941

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1
Volume Total	557	557	347	864	864	110
Volume Left	0	0	0	0	0	0
Volume Right	0	0	69	0	0	110
cSH	1700	1700	1700	1700	1700	941
Volume to Capacity	0.33	0.33	0.20	0.51	0.51	0.12
Queue Length 95th (ft)	0	0	0	0	0	10
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	9.3
Lane LOS						A
Approach Delay (s)	0.0			0.0		9.3
Approach LOS						A

Intersection Summary				
Average Delay	0.3			
Intersection Capacity Utilization	46.3%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↰↑↑	↱
Volume (vph)	0	968	1290	0	919	290
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		0.97	0.91
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3539	3539		3431	1441
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3539	3539		3431	1441
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	1076	1433	0	1021	322
RTOR Reduction (vph)	0	0	0	0	2	14
Lane Group Flow (vph)	0	1076	1433	0	1051	276
Turn Type						Prot
Protected Phases		4	8		6	6
Permitted Phases						
Actuated Green, G (s)		58.7	58.7		53.3	53.3
Effective Green, g (s)		58.7	58.7		53.3	53.3
Actuated g/C Ratio		0.49	0.49		0.44	0.44
Clearance Time (s)		4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1731	1731		1524	640
v/s Ratio Prot		0.30	c0.40		c0.31	0.19
v/s Ratio Perm						
v/c Ratio		0.62	0.83		0.69	0.43
Uniform Delay, d1		22.5	26.3		26.7	22.9
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		0.7	3.4		2.6	2.1
Delay (s)		23.2	29.7		29.3	25.0
Level of Service		C	C		C	C
Approach Delay (s)		23.2	29.7		28.4	
Approach LOS		C	C		C	

Intersection Summary				
HCM Average Control Delay	27.4	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.76			
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	69.3%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	235	1626	0	0	1408	913	615	10	889	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	0.97	0.95			0.91	1.00	0.95	0.91	0.95			
Frt	1.00	1.00			1.00	0.85	1.00	0.88	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99	1.00			
Satd. Flow (prot)	3433	3539			5085	1583	1681	1477	1504			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99	1.00			
Satd. Flow (perm)	3433	3539			5085	1583	1681	1477	1504			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	261	1807	0	0	1564	1014	683	11	988	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	478	0	8	8	0	0	0
Lane Group Flow (vph)	261	1807	0	0	1564	536	587	544	535	0	0	0
Turn Type	Prot					Prot	Split		Prot			
Protected Phases	7	4			8	8	2	2	2			
Permitted Phases												
Actuated Green, G (s)	10.0	67.0			53.0	53.0	45.0	45.0	45.0			
Effective Green, g (s)	10.0	67.0			53.0	53.0	45.0	45.0	45.0			
Actuated g/C Ratio	0.08	0.56			0.44	0.44	0.38	0.38	0.38			
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0			
Lane Grp Cap (vph)	286	1976			2246	699	630	554	564			
v/s Ratio Prot	0.08	c0.51			0.31	0.34	0.35	c0.37	0.36			
v/s Ratio Perm												
v/c Ratio	0.91	0.91			0.70	0.77	0.93	0.98	0.95			
Uniform Delay, d1	54.6	23.9			27.0	28.3	36.0	37.1	36.4			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	31.3	7.0			1.0	5.0	22.5	34.0	27.1			
Delay (s)	85.9	31.0			28.0	33.3	58.5	71.1	63.4			
Level of Service	F	C			C	C	E	E	E			
Approach Delay (s)		37.9			30.1			64.2			0.0	
Approach LOS		D			C			E			A	

Intersection Summary				
HCM Average Control Delay	41.7	HCM Level of Service	D	
HCM Volume to Capacity ratio	0.94			
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	99.6%	ICU Level of Service	F	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	242	2288	251	54	1649	67	618	65	157	50	29	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		0.97	0.95		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.89		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5056		3433	3164		1770	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5056		3433	3164		1770	1863	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	269	2542	279	60	1832	74	687	72	174	56	32	89
RTOR Reduction (vph)	0	0	77	0	3	0	0	99	0	0	0	83
Lane Group Flow (vph)	269	2542	202	60	1903	0	687	147	0	56	32	6
Turn Type	Prot		Prot	Prot			Prot				Prot	Prot
Protected Phases	7	4	4	3	8		5	2		1	6	6
Permitted Phases												
Actuated Green, G (s)	20.7	65.0	65.0	5.2	49.5		26.0	27.3		7.2	8.5	8.5
Effective Green, g (s)	20.7	65.0	65.0	5.2	49.5		26.0	27.3		7.2	8.5	8.5
Actuated g/C Ratio	0.17	0.54	0.54	0.04	0.41		0.22	0.23		0.06	0.07	0.07
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	304	2738	852	76	2074		740	716		106	131	111
v/s Ratio Prot	c0.15	c0.50	0.13	0.03	0.38		c0.20	c0.05		0.03	0.02	0.00
v/s Ratio Perm												
v/c Ratio	0.88	0.93	0.24	0.79	0.92		0.93	0.21		0.53	0.24	0.06
Uniform Delay, d1	48.8	25.7	14.7	57.2	33.7		46.4	37.9		55.1	53.1	52.4
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	24.9	6.2	0.1	40.6	7.0		17.7	0.1		4.7	1.0	0.2
Delay (s)	73.7	31.9	14.9	97.8	40.6		64.2	38.0		59.8	54.0	52.6
Level of Service	E	C	B	F	D		E	D		E	D	D
Approach Delay (s)		34.0			42.4			57.3			55.1	
Approach LOS		C			D			E			E	

Intersection Summary				
HCM Average Control Delay	40.8	HCM Level of Service	D	
HCM Volume to Capacity ratio	0.83			
Actuated Cycle Length (s)	120.7	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	81.8%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↱	↰	↑↑↑	↰↰	↱
Volume (vph)	2355	140	109	1540	235	182
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	5085	1583	1770	5085	3433	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	5085	1583	1770	5085	3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2560	152	118	1674	255	198
RTOR Reduction (vph)	0	65	0	0	0	112
Lane Group Flow (vph)	2560	87	118	1674	255	86
Turn Type		Perm	Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	36.1	36.1	5.0	45.1	10.3	10.3
Effective Green, g (s)	36.1	36.1	5.0	45.1	10.3	10.3
Actuated g/C Ratio	0.57	0.57	0.08	0.71	0.16	0.16
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2895	901	140	3617	558	257
v/s Ratio Prot	c0.50		c0.07	0.33	c0.07	
v/s Ratio Perm		0.05				0.05
v/c Ratio	0.88	0.10	0.84	0.46	0.46	0.33
Uniform Delay, d1	11.8	6.2	28.8	3.9	24.0	23.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.6	0.0	34.5	0.1	0.6	0.8
Delay (s)	15.4	6.3	63.3	4.0	24.6	24.3
Level of Service	B	A	E	A	C	C
Approach Delay (s)	14.9			7.9	24.5	
Approach LOS	B			A	C	

Intersection Summary				
HCM Average Control Delay	13.3	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.79			
Actuated Cycle Length (s)	63.4	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	68.2%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↱	↰↰	↑↑↑	↰	↱
Volume (vph)	2420	117	117	1454	195	195
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	0.97	0.91	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	5085	1583	3433	5085	1770	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	5085	1583	3433	5085	1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2630	127	127	1580	212	212
RTOR Reduction (vph)	0	53	0	0	0	85
Lane Group Flow (vph)	2630	74	127	1580	212	127
Turn Type		Perm	Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	38.4	38.4	3.1	45.5	12.5	12.5
Effective Green, g (s)	38.4	38.4	3.1	45.5	12.5	12.5
Actuated g/C Ratio	0.58	0.58	0.05	0.69	0.19	0.19
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2959	921	161	3506	335	300
v/s Ratio Prot	c0.52		c0.04	0.31	c0.12	
v/s Ratio Perm		0.05				0.08
v/c Ratio	0.89	0.08	0.79	0.45	0.63	0.42
Uniform Delay, d1	12.0	6.1	31.1	4.6	24.6	23.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.7	0.0	22.1	0.1	3.9	1.0
Delay (s)	15.6	6.1	53.2	4.7	28.5	24.5
Level of Service	B	A	D	A	C	C
Approach Delay (s)	15.2			8.3	26.5	
Approach LOS	B			A	C	

Intersection Summary				
HCM Average Control Delay	13.8	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.82			
Actuated Cycle Length (s)	66.0	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	67.5%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	491	1677	437	149	920	176	429	420	290	147	162	222
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.91		0.97	0.91		0.97	0.91	1.00	0.97	0.91	
Frt	1.00	0.97		1.00	0.98		1.00	1.00	0.85	1.00	0.91	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	4927		3433	4963		3433	5085	1583	3433	4644	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3433	4927		3433	4963		3433	5085	1583	3433	4644	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	546	1863	486	166	1022	196	477	467	322	163	180	247
RTOR Reduction (vph)	0	45	0	0	27	0	0	0	101	0	215	0
Lane Group Flow (vph)	546	2304	0	166	1191	0	477	467	221	163	212	0
Turn Type	Prot			Prot			Prot		Prot	Prot		
Protected Phases	7	4		3	8		5	2	2	1	6	
Permitted Phases												
Actuated Green, G (s)	18.3	46.1		5.9	33.7		14.7	19.7	19.7	7.2	12.2	
Effective Green, g (s)	18.3	46.1		5.9	33.7		14.7	19.7	19.7	7.2	12.2	
Actuated g/C Ratio	0.19	0.49		0.06	0.36		0.15	0.21	0.21	0.08	0.13	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	662	2393		213	1762		532	1056	329	260	597	
v/s Ratio Prot	c0.16	c0.47		0.05	0.24		c0.14	0.09	c0.14	0.05	0.05	
v/s Ratio Perm												
v/c Ratio	0.82	0.96		0.78	0.68		0.90	0.44	0.67	0.63	0.35	
Uniform Delay, d1	36.8	23.6		43.9	26.0		39.4	32.8	34.6	42.5	37.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	8.2	11.0		16.4	1.0		17.6	0.3	5.3	4.7	0.4	
Delay (s)	45.0	34.6		60.2	27.0		56.9	33.1	40.0	47.2	38.1	
Level of Service	D	C		E	C		E	C	D	D	D	
Approach Delay (s)		36.6			31.0			43.8			40.6	
Approach LOS		D			C			D			D	

Intersection Summary				
HCM Average Control Delay	37.2	HCM Level of Service	D	
HCM Volume to Capacity ratio	0.89			
Actuated Cycle Length (s)	94.9	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	80.1%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	135	1239	575	80	630	72	392	167	145	78	124	129
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	0.97	0.91		0.97	0.91		0.97	0.91		1.00	0.95	
Frt	1.00	0.95		1.00	0.98		1.00	0.93		1.00	0.92	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	4844		3433	5007		3433	4731		1770	3269	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	4844		3433	5007		3433	4731		1770	3269	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	150	1377	639	89	700	80	436	186	161	87	138	143
RTOR Reduction (vph)	0	76	0	0	13	0	0	129	0	0	126	0
Lane Group Flow (vph)	150	1940	0	89	767	0	436	218	0	87	155	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	8.0	43.3		3.8	39.1		14.8	17.7		7.4	10.3	
Effective Green, g (s)	8.0	43.3		3.8	39.1		14.8	17.7		7.4	10.3	
Actuated g/C Ratio	0.09	0.49		0.04	0.44		0.17	0.20		0.08	0.12	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	311	2378		148	2220		576	949		149	382	
v/s Ratio Prot	c0.04	c0.40		0.03	0.15		c0.13	0.05		0.05	c0.05	
v/s Ratio Perm												
v/c Ratio	0.48	0.82		0.60	0.35		0.76	0.23		0.58	0.40	
Uniform Delay, d1	38.1	19.1		41.5	16.1		35.0	29.5		38.9	36.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.2	2.3		6.7	0.1		5.6	0.1		5.7	0.7	
Delay (s)	39.3	21.3		48.2	16.2		40.6	29.7		44.6	36.8	
Level of Service	D	C		D	B		D	C		D	D	
Approach Delay (s)		22.6			19.5			35.8			38.7	
Approach LOS		C			B			D			D	

Intersection Summary				
HCM Average Control Delay	25.8	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.74			
Actuated Cycle Length (s)	88.2	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	72.2%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	48	1263	157	8	671	22	67	14	31	27	8	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	1.00		1.00	0.90		1.00	0.88	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5001		1770	5062		1770	1673		1770	1643	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	5001		1770	5062		1770	1673		1770	1643	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	53	1403	174	9	746	24	74	16	34	30	9	33
RTOR Reduction (vph)	0	19	0	0	4	0	0	30	0	0	31	0
Lane Group Flow (vph)	53	1558	0	9	766	0	74	20	0	30	11	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	1.3	20.1		0.6	19.4		2.5	4.5		0.6	2.6	
Effective Green, g (s)	1.3	20.1		0.6	19.4		2.5	4.5		0.6	2.6	
Actuated g/C Ratio	0.03	0.48		0.01	0.46		0.06	0.11		0.01	0.06	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	55	2405		25	2349		106	180		25	102	
v/s Ratio Prot	c0.03	c0.31		0.01	0.15		c0.04	c0.01		0.02	0.01	
v/s Ratio Perm												
v/c Ratio	0.96	0.65		0.36	0.33		0.70	0.11		1.20	0.11	
Uniform Delay, d1	20.2	8.2		20.4	7.1		19.3	16.8		20.6	18.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	107.4	0.6		8.7	0.1		18.2	0.3		247.2	0.5	
Delay (s)	127.6	8.8		29.1	7.2		37.4	17.1		267.8	19.0	
Level of Service	F	A		C	A		D	B		F	B	
Approach Delay (s)		12.7			7.4			29.2			122.7	
Approach LOS		B			A			C			F	

Intersection Summary				
HCM Average Control Delay	14.9	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.48			
Actuated Cycle Length (s)	41.8	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	51.6%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	289	966	63	21	478	24	39	45	34	23	32	190
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.94		1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5039		1770	5048		1770	1742		1770	1624	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	5039		1770	5048		1770	1742		1770	1624	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	321	1073	70	23	531	27	43	50	38	26	36	211
RTOR Reduction (vph)	0	9	0	0	8	0	0	31	0	0	177	0
Lane Group Flow (vph)	321	1134	0	23	550	0	43	57	0	26	70	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	11.9	26.3		0.7	15.1		1.4	9.3		0.7	8.6	
Effective Green, g (s)	11.9	26.3		0.7	15.1		1.4	9.3		0.7	8.6	
Actuated g/C Ratio	0.22	0.50		0.01	0.28		0.03	0.18		0.01	0.16	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	397	2500		23	1438		47	306		23	264	
v/s Ratio Prot	c0.18	c0.23		0.01	0.11		c0.02	0.03		0.01	c0.04	
v/s Ratio Perm												
v/c Ratio	0.81	0.45		1.00	0.38		0.91	0.19		1.13	0.27	
Uniform Delay, d1	19.5	8.7		26.2	15.2		25.7	18.6		26.2	19.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	11.5	0.1		187.7	0.2		98.6	0.3		231.0	0.5	
Delay (s)	31.0	8.8		213.8	15.4		124.3	18.9		257.2	20.0	
Level of Service	C	A		F	B		F	B		F	B	
Approach Delay (s)		13.7			23.2			53.5			42.6	
Approach LOS		B			C			D			D	

Intersection Summary				
HCM Average Control Delay	21.3	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.52			
Actuated Cycle Length (s)	53.0	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	55.9%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	826	181	89	422	117	248
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.91		1.00	0.91	0.97	1.00
Frt	0.97		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	4948		1770	5085	3433	1583
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	4948		1770	5085	3433	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	918	201	99	469	130	276
RTOR Reduction (vph)	57	0	0	0	0	230
Lane Group Flow (vph)	1062	0	99	469	130	46
Turn Type			Prot			Prot
Protected Phases	4		3	8	2	2
Permitted Phases						
Actuated Green, G (s)	16.4		2.4	22.8	5.7	5.7
Effective Green, g (s)	16.4		2.4	22.8	5.7	5.7
Actuated g/C Ratio	0.45		0.07	0.62	0.16	0.16
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2223		116	3176	536	247
v/s Ratio Prot	c0.21		c0.06	0.09	c0.04	0.03
v/s Ratio Perm						
v/c Ratio	0.48		0.85	0.15	0.24	0.18
Uniform Delay, d1	7.0		16.9	2.8	13.5	13.4
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2		42.0	0.0	0.2	0.4
Delay (s)	7.2		58.8	2.9	13.7	13.7
Level of Service	A		E	A	B	B
Approach Delay (s)	7.2			12.6	13.7	
Approach LOS	A			B	B	

Intersection Summary			
HCM Average Control Delay	9.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	36.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	42.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	196	39	39	188	23	248	117	635	163	325	375	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.95	0.95			1.00	1.00	0.97	0.91		0.97	0.91	1.00
Frt	1.00	0.96			1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	0.98			0.96	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1658			1783	1583	3433	4930		3433	5085	1583
Flt Permitted	0.95	0.98			0.96	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1681	1658			1783	1583	3433	4930		3433	5085	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	218	43	43	209	26	276	130	706	181	361	417	52
RTOR Reduction (vph)	0	18	0	0	0	218	0	50	0	0	0	34
Lane Group Flow (vph)	153	133	0	0	235	58	130	837	0	361	417	18
Turn Type	Split			Split		Perm	Prot			Prot		Perm
Protected Phases	2	2		6	6		3	8		7	4	
Permitted Phases						6						4
Actuated Green, G (s)	11.7	11.7			15.2	15.2	4.6	18.0		11.3	24.7	24.7
Effective Green, g (s)	11.7	11.7			15.2	15.2	4.6	18.0		11.3	24.7	24.7
Actuated g/C Ratio	0.16	0.16			0.21	0.21	0.06	0.25		0.16	0.34	0.34
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	272	269			375	333	219	1229		537	1740	542
v/s Ratio Prot	c0.09	0.08			c0.13		0.04	c0.17		c0.11	0.08	
v/s Ratio Perm						0.04						0.01
v/c Ratio	0.56	0.50			0.63	0.17	0.59	0.68		0.67	0.24	0.03
Uniform Delay, d1	27.9	27.6			25.9	23.4	32.9	24.5		28.7	17.0	15.8
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.7	1.4			3.3	0.3	4.3	1.6		3.3	0.1	0.0
Delay (s)	30.5	29.0			29.2	23.6	37.2	26.1		32.0	17.1	15.8
Level of Service	C	C			C	C	D	C		C	B	B
Approach Delay (s)		29.8			26.2			27.5			23.5	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	26.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	72.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	53.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	126	105	173	14	54	115	113	514	10	182	597	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.90		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1673		1770	3529		1770	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	1863	1583	1770	1673		1770	3529		1770	3539	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	140	117	192	16	60	128	126	571	11	202	663	104
RTOR Reduction (vph)	0	0	133	0	104	0	0	2	0	0	0	73
Lane Group Flow (vph)	140	117	59	16	84	0	126	580	0	202	663	31
Turn Type	Prot		Prot	Prot			Prot			Prot		Prot
Protected Phases	7	4	4	3	8		5	2		1	6	6
Permitted Phases												
Actuated Green, G (s)	8.1	18.2	18.2	0.7	10.8		6.6	14.3		9.6	17.3	17.3
Effective Green, g (s)	8.1	18.2	18.2	0.7	10.8		6.6	14.3		9.6	17.3	17.3
Actuated g/C Ratio	0.14	0.31	0.31	0.01	0.18		0.11	0.24		0.16	0.29	0.29
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	244	577	490	21	307		199	858		289	1041	466
v/s Ratio Prot	c0.08	0.06	0.04	0.01	c0.05		0.07	0.16		c0.11	c0.19	0.02
v/s Ratio Perm												
v/c Ratio	0.57	0.20	0.12	0.76	0.27		0.63	0.68		0.70	0.64	0.07
Uniform Delay, d1	23.7	15.0	14.6	29.0	20.6		24.9	20.2		23.2	18.0	14.9
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	3.2	0.2	0.1	92.1	0.5		6.4	2.1		7.2	1.3	0.1
Delay (s)	27.0	15.1	14.7	121.0	21.1		31.4	22.3		30.4	19.3	15.0
Level of Service	C	B	B	F	C		C	C		C	B	B
Approach Delay (s)		18.6			28.9			23.9			21.2	
Approach LOS		B			C			C			C	

Intersection Summary				
HCM Average Control Delay	22.2	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.57			
Actuated Cycle Length (s)	58.8	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	54.8%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	11	6	10	140	0	109	7	770	200	146	539	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0		4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00		1.00	1.00	0.91		1.00	0.91	
Frt	1.00	0.91		1.00		0.85	1.00	0.97		1.00	1.00	
Flt Protected	0.95	1.00		0.95		1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1692		1770		1583	1770	4928		1770	5083	
Flt Permitted	0.95	1.00		0.95		1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1692		1770		1583	1770	4928		1770	5083	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	12	7	11	156	0	121	8	856	222	162	599	2
RTOR Reduction (vph)	0	11	0	0	0	103	0	60	0	0	0	0
Lane Group Flow (vph)	12	7	0	156	0	18	8	1018	0	162	601	0
Turn Type	Prot			Prot		Prot	Prot			Prot		
Protected Phases	1	6		5	2	2	7	4		3	8	
Permitted Phases												
Actuated Green, G (s)	0.7	1.1		7.1		7.5	0.7	19.0		7.9	26.2	
Effective Green, g (s)	0.7	1.1		7.1		7.5	0.7	19.0		7.9	26.2	
Actuated g/C Ratio	0.01	0.02		0.14		0.15	0.01	0.37		0.15	0.51	
Clearance Time (s)	4.0	4.0		4.0		4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0		3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	24	36		246		232	24	1832		274	2606	
v/s Ratio Prot	0.01	0.00		c0.09		c0.01	0.00	c0.21		c0.09	0.12	
v/s Ratio Perm												
v/c Ratio	0.50	0.20		0.63		0.08	0.33	0.56		0.59	0.23	
Uniform Delay, d1	25.0	24.6		20.8		18.8	25.0	12.7		20.1	6.9	
Progression Factor	1.00	1.00		1.00		1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	15.4	2.7		5.3		0.1	8.0	0.4		3.4	0.0	
Delay (s)	40.5	27.3		26.0		19.0	33.0	13.1		23.5	6.9	
Level of Service	D	C		C		B	C	B		C	A	
Approach Delay (s)		32.6			22.9			13.2			10.4	
Approach LOS		C			C			B			B	

Intersection Summary				
HCM Average Control Delay	13.8	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.51			
Actuated Cycle Length (s)	51.1	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	51.9%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	307	237	123	32	99	17	94	383	39	25	446	260
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85		0.98		1.00	0.99		1.00	0.94	
Flt Protected	0.95	1.00	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583		1814		1770	3490		1770	3343	
Flt Permitted	0.95	1.00	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1583		1814		1770	3490		1770	3343	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	323	249	129	34	104	18	99	403	41	26	469	274
RTOR Reduction (vph)	0	0	98	0	8	0	0	10	0	0	119	0
Lane Group Flow (vph)	323	249	31	0	148	0	99	434	0	26	624	0
Turn Type	Split		Prot	Split			Prot			Prot		
Protected Phases	4	4	4	8	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	14.1	14.1	14.1		8.1		3.7	19.2		1.2	16.7	
Effective Green, g (s)	14.1	14.1	14.1		8.1		3.7	19.2		1.2	16.7	
Actuated g/C Ratio	0.24	0.24	0.24		0.14		0.06	0.33		0.02	0.28	
Clearance Time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	426	448	381		251		112	1143		36	953	
v/s Ratio Prot	c0.18	0.13	0.02		c0.08		c0.06	0.12		0.01	c0.19	
v/s Ratio Perm												
v/c Ratio	0.76	0.56	0.08		0.59		0.88	0.38		0.72	0.65	
Uniform Delay, d1	20.7	19.5	17.2		23.7		27.2	15.1		28.5	18.4	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	7.6	1.5	0.1		3.7		50.4	0.2		52.1	1.6	
Delay (s)	28.2	21.0	17.3		27.4		77.6	15.3		80.6	20.0	
Level of Service	C	C	B		C		E	B		F	C	
Approach Delay (s)		23.7			27.4			26.7			22.1	
Approach LOS		C			C			C			C	

Intersection Summary				
HCM Average Control Delay	24.1	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.68			
Actuated Cycle Length (s)	58.6	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	64.2%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBR	EBR2	NWL2	NWL	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	72	271	315	96	168	123	258	1015	92	165	581	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.97		0.97	0.91		1.00	0.91	
Frt	1.00	0.85	0.85	1.00	0.94		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1583	1583	1770	3290		3433	5022		1770	5033	
Flt Permitted	0.95	1.00	1.00	0.95	0.97		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1583	1583	1770	3290		3433	5022		1770	5033	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	80	301	350	107	187	137	287	1128	102	183	646	48
RTOR Reduction (vph)	0	0	224	0	126	0	0	18	0	0	14	0
Lane Group Flow (vph)	80	301	126	107	198	0	287	1212	0	183	680	0
Turn Type		Perm	Perm	Split			Prot			Prot		
Protected Phases	2			6	6		3	8		7	4	
Permitted Phases		2	2									
Actuated Green, G (s)	16.7	16.7	16.7	4.8	4.8		6.0	15.6		6.9	16.5	
Effective Green, g (s)	16.7	16.7	16.7	4.8	4.8		6.0	15.6		6.9	16.5	
Actuated g/C Ratio	0.28	0.28	0.28	0.08	0.08		0.10	0.26		0.12	0.28	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	493	441	441	142	263		343	1306		204	1384	
v/s Ratio Prot	0.05			c0.06	0.06		0.08	c0.24		c0.10	0.14	
v/s Ratio Perm		c0.19	0.08									
v/c Ratio	0.16	0.68	0.29	0.75	0.75		0.84	0.93		0.90	0.49	
Uniform Delay, d1	16.4	19.3	17.0	27.0	27.0		26.5	21.7		26.2	18.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.7	8.3	1.6	20.0	11.5		16.1	11.5		35.8	0.3	
Delay (s)	17.1	27.6	18.6	47.0	38.5		42.6	33.1		62.0	18.5	
Level of Service	B	C	B	D	D		D	C		E	B	
Approach Delay (s)	22.1				40.6			34.9			27.6	
Approach LOS	C				D			C			C	

Intersection Summary				
HCM Average Control Delay	31.2	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.81			
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	57.6%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	204	25	151	4	11	4	106	24	8	2	7	102
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	227	28	168	4	12	4	118	27	9	2	8	113

Direction, Lane #	SE 1	SE 2	NW 1	NE 1	SW 1
Volume Total (vph)	254	168	21	153	123
Volume Left (vph)	227	0	4	118	2
Volume Right (vph)	0	168	4	9	113
Hadj (s)	0.48	-0.67	-0.05	0.15	-0.51
Departure Headway (s)	5.7	4.6	5.2	5.3	4.7
Degree Utilization, x	0.40	0.21	0.03	0.22	0.16
Capacity (veh/h)	605	756	632	644	711
Control Delay (s)	11.4	7.6	8.4	9.8	8.5
Approach Delay (s)	9.9		8.4	9.8	8.5
Approach LOS	A		A	A	A

Intersection Summary			
Delay	9.6		
HCM Level of Service	A		
Intersection Capacity Utilization	40.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	116	50	70	55	26	9	108	743	134	6	360	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85		0.99		1.00	0.98		1.00	0.97	
Flt Protected		0.97	1.00		0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1800	1583		1783		1770	3458		1770	3441	
Flt Permitted		0.97	1.00		0.97		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1800	1583		1783		1770	3458		1770	3441	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	129	56	78	61	29	10	120	826	149	7	400	91
RTOR Reduction (vph)	0	0	66	0	6	0	0	15	0	0	22	0
Lane Group Flow (vph)	0	185	12	0	94	0	120	960	0	7	469	0
Turn Type	Split		Prot	Split			Prot			Prot		
Protected Phases	4	4	4	8	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)		8.7	8.7		6.5		5.7	25.8		0.7	20.8	
Effective Green, g (s)		8.7	8.7		6.5		5.7	25.8		0.7	20.8	
Actuated g/C Ratio		0.15	0.15		0.11		0.10	0.45		0.01	0.36	
Clearance Time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		271	239		201		175	1546		21	1240	
v/s Ratio Prot		c0.10	0.01		c0.05		c0.07	c0.28		0.00	0.14	
v/s Ratio Perm												
v/c Ratio		0.68	0.05		0.47		0.69	0.62		0.33	0.38	
Uniform Delay, d1		23.2	21.0		24.0		25.1	12.2		28.3	13.7	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		6.9	0.1		1.7		10.6	0.8		9.1	0.2	
Delay (s)		30.1	21.0		25.7		35.7	13.0		37.4	13.9	
Level of Service		C	C		C		D	B		D	B	
Approach Delay (s)		27.4			25.7			15.5			14.2	
Approach LOS		C			C			B			B	

Intersection Summary					
HCM Average Control Delay	17.3	HCM Level of Service		B	
HCM Volume to Capacity ratio	0.60				
Actuated Cycle Length (s)	57.7	Sum of lost time (s)		12.0	
Intersection Capacity Utilization	49.8%	ICU Level of Service		A	
Analysis Period (min)	15				
c Critical Lane Group					

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑		↰↰	↑↑					↰	↕	↱
Volume (vph)	0	627	137	604	877	0	0	0	0	835	1	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		0.97	0.95					0.95	0.91	0.95
Frt		0.97		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.95	1.00
Satd. Flow (prot)		3444		3433	3539					1681	1612	1504
Flt Permitted		1.00		0.95	1.00					0.95	0.95	1.00
Satd. Flow (perm)		3444		3433	3539					1681	1612	1504
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	697	152	671	974	0	0	0	0	928	1	81
RTOR Reduction (vph)	0	31	0	0	0	0	0	0	0	0	1	50
Lane Group Flow (vph)	0	818	0	671	974	0	0	0	0	473	463	23
Turn Type				Prot						Split		Prot
Protected Phases		4		3	8					6	6	6
Permitted Phases												
Actuated Green, G (s)		16.3		12.8	33.1					18.6	18.6	18.6
Effective Green, g (s)		16.3		12.8	33.1					18.6	18.6	18.6
Actuated g/C Ratio		0.27		0.21	0.55					0.31	0.31	0.31
Clearance Time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		940		736	1962					524	502	469
v/s Ratio Prot		c0.24		c0.20	0.28					0.28	c0.29	0.02
v/s Ratio Perm												
v/c Ratio		0.87		0.91	0.50					0.90	0.92	0.05
Uniform Delay, d1		20.7		22.9	8.2					19.7	19.8	14.4
Progression Factor		1.00		1.00	1.00					1.00	1.00	1.00
Incremental Delay, d2		8.7		15.5	0.2					18.7	22.5	0.0
Delay (s)		29.3		38.4	8.4					38.4	42.3	14.4
Level of Service		C		D	A					D	D	B
Approach Delay (s)		29.3			20.6			0.0			38.5	
Approach LOS		C			C			A			D	

Intersection Summary				
HCM Average Control Delay	27.9	HCM Level of Service		C
HCM Volume to Capacity ratio	0.90			
Actuated Cycle Length (s)	59.7	Sum of lost time (s)		12.0
Intersection Capacity Utilization	80.9%	ICU Level of Service		D
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑			↑↑	↱	↰	↕	↱			
Volume (vph)	123	1371	0	0	993	780	439	7	667	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	0.97	0.95			0.95	1.00	0.95	0.91	0.95			
Frt	1.00	1.00			1.00	0.85	1.00	0.87	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99	1.00			
Satd. Flow (prot)	3433	3539			3539	1583	1681	1472	1504			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99	1.00			
Satd. Flow (perm)	3433	3539			3539	1583	1681	1472	1504			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	137	1523	0	0	1103	867	488	8	741	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	524	0	13	13	0	0	0
Lane Group Flow (vph)	137	1523	0	0	1103	343	429	395	387	0	0	0
Turn Type	Prot					Prot	Split		Prot			
Protected Phases	7	4			8	8	2	2	2			
Permitted Phases												
Actuated Green, G (s)	3.4	30.2			22.8	22.8	19.5	19.5	19.5			
Effective Green, g (s)	3.4	30.2			22.8	22.8	19.5	19.5	19.5			
Actuated g/C Ratio	0.06	0.52			0.40	0.40	0.34	0.34	0.34			
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0			
Lane Grp Cap (vph)	202	1852			1398	626	568	497	508			
v/s Ratio Prot	0.04	c0.43			0.31	0.22	0.26	c0.27	0.26			
v/s Ratio Perm												
v/c Ratio	0.68	0.82			0.79	0.55	0.76	0.80	0.76			
Uniform Delay, d1	26.6	11.5			15.3	13.5	17.0	17.3	17.0			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	8.7	3.1			3.0	1.0	5.7	8.6	6.7			
Delay (s)	35.3	14.6			18.4	14.4	22.7	25.9	23.7			
Level of Service	D	B			B	B	C	C	C			
Approach Delay (s)		16.3			16.6			24.1			0.0	
Approach LOS		B			B			C			A	

Intersection Summary				
HCM Average Control Delay	18.4	HCM Level of Service		B
HCM Volume to Capacity ratio	0.81			
Actuated Cycle Length (s)	57.7	Sum of lost time (s)		8.0
Intersection Capacity Utilization	80.9%	ICU Level of Service		D
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	38	30	28	476	22	115	75	921	214	192	1379	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.95	0.91	0.95	0.95	0.91	0.95	1.00	0.91		1.00	0.91	
Frt	1.00	0.99	0.85	1.00	0.99	0.85	1.00	0.97		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1681	1668	1504	1681	1613	1504	1770	4941		1770	5072	
Flt Permitted	0.95	1.00	1.00	0.95	0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1681	1668	1504	1681	1613	1504	1770	4941		1770	5072	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	42	33	31	529	24	128	83	1023	238	213	1532	28
RTOR Reduction (vph)	0	3	26	0	2	88	0	38	0	0	2	0
Lane Group Flow (vph)	38	37	2	286	278	27	83	1223	0	213	1558	0
Turn Type	Split		Prot	Split		Prot	Prot			Prot		
Protected Phases	4	4	4	8	8	8	5	2!		6!		
Permitted Phases											6	
Actuated Green, G (s)	5.7	5.7	5.7	17.4	17.4	17.4	4.3	39.7		31.4	31.4	
Effective Green, g (s)	5.7	5.7	5.7	17.4	17.4	17.4	4.3	39.7		31.4	31.4	
Actuated g/C Ratio	0.08	0.08	0.08	0.23	0.23	0.23	0.06	0.53		0.42	0.42	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	128	127	115	391	375	350	102	2622		743	2129	
v/s Ratio Prot	c0.02	0.02	0.00	0.17	c0.17	0.02	c0.05	0.25		0.12		
v/s Ratio Perm											c0.31	
v/c Ratio	0.30	0.29	0.02	0.73	0.74	0.08	0.81	0.47		0.29	0.73	
Uniform Delay, d1	32.7	32.6	32.0	26.5	26.6	22.4	34.9	10.9		14.3	18.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.3	1.3	0.1	6.9	7.7	0.1	37.2	0.1		0.2	1.3	
Delay (s)	34.0	33.9	32.0	33.4	34.4	22.5	72.0	11.1		14.5	19.5	
Level of Service	C	C	C	C	C	C	E	B		B	B	
Approach Delay (s)		33.4			32.0			14.8			18.9	
Approach LOS		C			C			B			B	

Intersection Summary				
HCM Average Control Delay	20.2	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.70			
Actuated Cycle Length (s)	74.8	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	64.8%	ICU Level of Service	C	
Analysis Period (min)	15			

! Phase conflict between lane groups.
c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	166	807	170	341	995	0	0	643	770
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0	4.0	4.0	4.0	4.0			4.0	4.0
Lane Util. Factor				0.97	0.91	1.00	0.97	0.95			0.86	0.86
Frpb, ped/bikes				1.00	1.00	1.00	1.00	1.00			0.92	1.00
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00			1.00	1.00
Frt				1.00	1.00	0.85	1.00	1.00			0.94	0.85
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				3433	5085	1583	3433	3539			4150	1362
Flt Permitted				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)				3433	5085	1583	3433	3539			4150	1362
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	184	897	189	379	1106	0	0	714	856
RTOR Reduction (vph)	0	0	0	0	0	66	0	0	0	0	10	10
Lane Group Flow (vph)	0	0	0	184	897	123	379	1106	0	0	1132	418
Confl. Peds. (#/hr)												200
Turn Type				Prot		Perm	Prot					Prot
Protected Phases				3	8		5	2			6	6
Permitted Phases						8						
Actuated Green, G (s)				15.8	15.8	15.8	8.0	34.6			22.6	22.6
Effective Green, g (s)				15.8	15.8	15.8	8.0	34.6			22.6	22.6
Actuated g/C Ratio				0.27	0.27	0.27	0.14	0.59			0.39	0.39
Clearance Time (s)				4.0	4.0	4.0	4.0	4.0			4.0	4.0
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)				929	1376	428	470	2097			1606	527
v/s Ratio Prot				0.05	c0.18		c0.11	0.31			0.27	c0.31
v/s Ratio Perm						0.08						
v/c Ratio				0.20	0.65	0.29	0.81	0.53			0.70	0.79
Uniform Delay, d1				16.4	18.9	16.8	24.4	7.1			15.1	15.8
Progression Factor				1.00	1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2				0.1	1.1	0.4	9.8	0.2			1.4	8.0
Delay (s)				16.5	20.0	17.2	34.2	7.3			16.5	23.9
Level of Service				B	B	B	C	A			B	C
Approach Delay (s)		0.0			19.1			14.2			18.5	
Approach LOS		A			B			B			B	

Intersection Summary				
HCM Average Control Delay	17.2	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.75			
Actuated Cycle Length (s)	58.4	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	105.9%	ICU Level of Service	G	
Analysis Period (min)	15			

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	492	989	92	0	0	0	0	808	385	219	576	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Lane Util. Factor	0.91	0.86	0.91					0.86		1.00	0.91	
Frt	1.00	1.00	0.85					0.95		1.00	1.00	
Flt Protected	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	1610	3192	1441					6098		1770	5085	
Flt Permitted	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	1610	3192	1441					6098		1770	5085	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	547	1099	102	0	0	0	0	898	428	243	640	0
RTOR Reduction (vph)	0	1	55	0	0	0	0	52	0	0	0	0
Lane Group Flow (vph)	492	1163	37	0	0	0	0	1274	0	243	640	0
Turn Type	Split		Prot							Prot		
Protected Phases	4	4	4					2		1	6	
Permitted Phases												
Actuated Green, G (s)	30.0	30.0	30.0					20.0		12.5	36.5	
Effective Green, g (s)	30.0	30.0	30.0					20.0		12.5	36.5	
Actuated g/C Ratio	0.40	0.40	0.40					0.27		0.17	0.49	
Clearance Time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	648	1285	580					1637		297	2491	
v/s Ratio Prot	0.31	c0.36	0.03					c0.21		c0.14	0.13	
v/s Ratio Perm												
v/c Ratio	0.76	0.91	0.06					0.88dr		0.82	0.26	
Uniform Delay, d1	19.1	20.9	13.6					25.2		29.9	11.1	
Progression Factor	1.00	1.00	1.00					1.00		1.00	1.00	
Incremental Delay, d2	5.1	9.2	0.0					2.4		15.9	0.1	
Delay (s)	24.2	30.2	13.7					27.6		45.8	11.1	
Level of Service	C	C	B					C		D	B	
Approach Delay (s)		27.6			0.0			27.6			20.7	
Approach LOS		C			A			C			C	

Intersection Summary				
HCM Average Control Delay	26.1	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.85			
Actuated Cycle Length (s)	74.5	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	105.9%	ICU Level of Service	G	
Analysis Period (min)	15			

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group

Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Volume (vph)	66	387	0	360	94	30	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		0.95		1.00	1.00
Frt	1.00	1.00		0.97		1.00	0.85
Flt Protected	0.95	1.00		1.00		0.95	1.00
Satd. Flow (prot)	1770	3539		3430		1770	1583
Flt Permitted	0.95	1.00		1.00		0.95	1.00
Satd. Flow (perm)	1770	3539		3430		1770	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	73	430	0	400	104	33	51
RTOR Reduction (vph)	0	0	0	43	0	0	47
Lane Group Flow (vph)	73	430	0	461	0	33	4
Turn Type	Prot		Prot				Prot
Protected Phases	7	4	3	8		6	6
Permitted Phases							
Actuated Green, G (s)	1.2	14.0		8.8		1.7	1.7
Effective Green, g (s)	1.2	14.0		8.8		1.7	1.7
Actuated g/C Ratio	0.05	0.59		0.37		0.07	0.07
Clearance Time (s)	4.0	4.0		4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0		3.0	3.0
Lane Grp Cap (vph)	90	2091		1274		127	114
v/s Ratio Prot	c0.04	0.12		c0.13		c0.02	0.00
v/s Ratio Perm							
v/c Ratio	0.81	0.21		0.36		0.26	0.03
Uniform Delay, d1	11.1	2.3		5.4		10.4	10.2
Progression Factor	1.00	1.00		1.00		1.00	1.00
Incremental Delay, d2	40.5	0.0		0.2		1.1	0.1
Delay (s)	51.6	2.3		5.6		11.5	10.3
Level of Service	D	A		A		B	B
Approach Delay (s)		9.5		5.6		10.8	
Approach LOS		A		A		B	

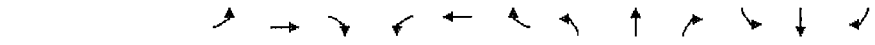
Intersection Summary				
HCM Average Control Delay	7.8	HCM Level of Service	A	
HCM Volume to Capacity ratio	0.39			
Actuated Cycle Length (s)	23.7	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	29.9%	ICU Level of Service	A	
Analysis Period (min)	15			

c Critical Lane Group



Movement	EBL	EBR	EBR2	WBL	WBT	WBR	NBL	NBT	NBR2	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	115	284	290	31	157	96	312	812	111	264	131	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.88	1.00	1.00	1.00		1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.85	0.85	1.00	0.94		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	2787	1583	1770	1756		1770	3539	1583	3433	3539	1583
Flt Permitted	0.59	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1094	2787	1583	1770	1756		1770	3539	1583	3433	3539	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	128	316	322	34	174	107	347	902	123	293	146	156
RTOR Reduction (vph)	0	0	254	0	34	0	0	0	80	0	0	118
Lane Group Flow (vph)	128	316	68	34	247	0	347	902	43	293	146	38
Turn Type	custom	custom	custom	Prot			Prot		Prot	Prot		Prot
Protected Phases				3	8		5	2	2	1	6	6
Permitted Phases	4	4	4									
Actuated Green, G (s)	12.6	12.6	12.6	1.5	18.1		15.1	21.0	21.0	8.5	14.4	14.4
Effective Green, g (s)	12.6	12.6	12.6	1.5	18.1		15.1	21.0	21.0	8.5	14.4	14.4
Actuated g/C Ratio	0.21	0.21	0.21	0.03	0.30		0.25	0.35	0.35	0.14	0.24	0.24
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	231	589	335	45	533		448	1247	558	490	855	382
v/s Ratio Prot				0.02	c0.14		c0.20	c0.25	0.03	0.09	0.04	0.02
v/s Ratio Perm	0.12	0.11	0.04									
v/c Ratio	0.55	0.54	0.20	0.76	0.46		0.77	0.72	0.08	0.60	0.17	0.10
Uniform Delay, d1	21.0	20.9	19.4	28.9	16.8		20.7	16.8	12.9	23.9	17.9	17.6
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.9	0.9	0.3	51.4	0.6		8.2	2.1	0.1	2.0	0.1	0.1
Delay (s)	23.9	21.8	19.7	80.3	17.5		28.8	18.9	12.9	25.9	18.0	17.7
Level of Service	C	C	B	F	B		C	B	B	C	B	B
Approach Delay (s)					24.2			20.9			21.8	
Approach LOS					C			C			C	

Intersection Summary				
HCM Average Control Delay	21.5	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.63			
Actuated Cycle Length (s)	59.6	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	63.8%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	908	0	92	0	0	0	0	333	43	348	99	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95	1.00					0.95		0.97	0.95	
Frt	1.00	1.00	0.85					0.98		1.00	1.00	
Flt Protected	0.95	0.95	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	1681	1681	1583					3478		3433	3539	
Flt Permitted	0.95	0.95	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	1681	1681	1583					3478		3433	3539	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1009	0	102	0	0	0	0	370	48	387	110	0
RTOR Reduction (vph)	0	0	63	0	0	0	0	18	0	0	0	0
Lane Group Flow (vph)	504	505	39	0	0	0	0	400	0	387	110	0
Turn Type	Split		Prot							Prot		
Protected Phases	4	4	4					2		1	6	
Permitted Phases												
Actuated Green, G (s)	20.1	20.1	20.1					11.7		8.9	24.6	
Effective Green, g (s)	20.1	20.1	20.1					11.7		8.9	24.6	
Actuated g/C Ratio	0.38	0.38	0.38					0.22		0.17	0.47	
Clearance Time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	641	641	604					772		580	1652	
v/s Ratio Prot	0.30	c0.30	0.02					c0.12		c0.11	0.03	
v/s Ratio Perm												
v/c Ratio	0.79	0.79	0.06					0.52		0.67	0.07	
Uniform Delay, d1	14.4	14.4	10.3					18.0		20.5	7.7	
Progression Factor	1.00	1.00	1.00					1.00		1.00	1.00	
Incremental Delay, d2	6.3	6.4	0.0					0.6		2.9	0.0	
Delay (s)	20.7	20.8	10.4					18.6		23.4	7.7	
Level of Service	C	C	B					B		C	A	
Approach Delay (s)		19.8			0.0			18.6			20.0	
Approach LOS		B			A			B			B	

Intersection Summary				
HCM Average Control Delay	19.6	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.68			
Actuated Cycle Length (s)	52.7	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	55.7%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	127	459	43	91	407	400	52	128	104	230	52	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		0.97	1.00	
Frt	1.00	0.99		1.00	0.93		1.00	0.93		1.00	0.92	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3494		1770	3276		1770	1737		3433	1708	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3494		1770	3276		1770	1737		3433	1708	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	141	510	48	101	452	444	58	142	116	256	58	72
RTOR Reduction (vph)	0	8	0	0	213	0	0	37	0	0	50	0
Lane Group Flow (vph)	141	550	0	101	683	0	58	221	0	256	80	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												
Actuated Green, G (s)	8.8	20.1		7.6	18.9		4.8	15.5		8.7	19.4	
Effective Green, g (s)	8.8	20.1		7.6	18.9		4.8	15.5		8.7	19.4	
Actuated g/C Ratio	0.13	0.30		0.11	0.28		0.07	0.23		0.13	0.29	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	229	1034		198	912		125	397		440	488	
v/s Ratio Prot	c0.08	0.16		0.06	c0.21		0.03	c0.13		c0.07	c0.05	
v/s Ratio Perm												
v/c Ratio	0.62	0.53		0.51	0.75		0.46	0.56		0.58	0.16	
Uniform Delay, d1	28.0	20.0		28.4	22.3		30.3	23.2		27.9	18.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.9	0.5		2.2	3.4		2.7	1.7		2.0	0.2	
Delay (s)	32.8	20.5		30.6	25.7		33.0	24.9		29.8	18.3	
Level of Service	C	C		C	C		C	C		C	B	
Approach Delay (s)		23.0			26.2			26.4			26.0	
Approach LOS		C			C			C			C	

Intersection Summary				
HCM Average Control Delay	25.3	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.67			
Actuated Cycle Length (s)	67.9	Sum of lost time (s)	20.0	
Intersection Capacity Utilization	64.1%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	WBL	WBR	SEL	SET	NWT	NWR	NWR2	SWL	SWR
Lane Configurations									
Volume (vph)	0	0	269	494	621	0	190	147	257
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor			0.97	0.95	0.95		1.00	0.97	1.00
Frt			1.00	1.00	1.00		0.85	1.00	0.85
Flt Protected			0.95	1.00	1.00		1.00	0.95	1.00
Satd. Flow (prot)			3433	3539	3539		1583	3433	1583
Flt Permitted			0.95	1.00	1.00		1.00	0.95	1.00
Satd. Flow (perm)			3433	3539	3539		1583	3433	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	299	549	690	0	211	163	286
RTOR Reduction (vph)	0	0	0	0	0	0	136	0	235
Lane Group Flow (vph)	0	0	299	549	690	0	75	163	51
Turn Type			Prot				Perm		Perm
Protected Phases			5	2	6			4	
Permitted Phases							6		4
Actuated Green, G (s)			9.5	29.8	16.3		16.3	8.3	8.3
Effective Green, g (s)			9.5	29.8	16.3		16.3	8.3	8.3
Actuated g/C Ratio			0.21	0.65	0.35		0.35	0.18	0.18
Clearance Time (s)			4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)			3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)			707	2288	1251		560	618	285
v/s Ratio Prot			c0.09	0.16	c0.19			c0.05	
v/s Ratio Perm							0.05		0.03
v/c Ratio			0.42	0.24	0.55		0.13	0.26	0.18
Uniform Delay, d1			15.9	3.4	12.0		10.1	16.3	16.0
Progression Factor			1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2			0.4	0.1	0.5		0.1	0.2	0.3
Delay (s)			16.3	3.5	12.5		10.2	16.5	16.3
Level of Service			B	A	B		B	B	B
Approach Delay (s)	0.0			8.0	12.0			16.4	
Approach LOS	A			A	B			B	

Intersection Summary				
HCM Average Control Delay	11.3	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.45			
Actuated Cycle Length (s)	46.1	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	39.7%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL2	EBL	EBR	SEL	SET	SER	NWL	NWT	NWR	SWL	SWR
Lane Configurations											
Volume (vph)	399	0	241	276	375	0	0	401	255	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		
Lane Util. Factor	0.95	0.95	1.00	0.97	0.95			0.95	1.00		
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		
Flt Protected	0.95	0.95	1.00	0.95	1.00			1.00	1.00		
Satd. Flow (prot)	1681	1681	1583	3433	3539			3539	1583		
Flt Permitted	0.95	0.95	1.00	0.95	1.00			1.00	1.00		
Satd. Flow (perm)	1681	1681	1583	3433	3539			3539	1583		
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	443	0	268	307	417	0	0	446	283	0	0
RTOR Reduction (vph)	0	0	192	0	0	0	0	0	200	0	0
Lane Group Flow (vph)	221	222	76	307	417	0	0	446	83	0	0
Turn Type	Split		Prot	Prot					Prot		
Protected Phases	4	4	4	1	6			2	2		
Permitted Phases											
Actuated Green, G (s)	11.4	11.4	11.4	5.2	21.0			11.8	11.8		
Effective Green, g (s)	11.4	11.4	11.4	5.2	21.0			11.8	11.8		
Actuated g/C Ratio	0.28	0.28	0.28	0.13	0.52			0.29	0.29		
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0		
Lane Grp Cap (vph)	474	474	447	442	1840			1034	462		
v/s Ratio Prot	0.13	c0.13	0.05	c0.09	0.12			c0.13	0.05		
v/s Ratio Perm											
v/c Ratio	0.47	0.47	0.17	0.69	0.23			0.43	0.18		
Uniform Delay, d1	12.0	12.0	10.9	16.8	5.3			11.6	10.7		
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00	1.00		
Incremental Delay, d2	0.7	0.7	0.2	4.7	0.1			0.3	0.2		
Delay (s)	12.7	12.7	11.1	21.5	5.3			11.9	10.9		
Level of Service	B	B	B	C	A			B	B		
Approach Delay (s)		12.1			12.2			11.5		0.0	
Approach LOS		B			B			B		A	

Intersection Summary			
HCM Average Control Delay	11.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	40.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	40.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	5	5	4	55	12	10	12	756	100	15	428	10
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	6	6	4	61	13	11	13	840	111	17	476	11

Direction, Lane #	EB 1	WB 1	NE 1	NE 2	SW 1	SW 2
Volume Total (vph)	16	86	433	531	254	249
Volume Left (vph)	6	61	13	0	17	0
Volume Right (vph)	4	11	0	111	0	11
Hadj (s)	-0.07	0.10	0.05	-0.11	0.07	0.00
Departure Headway (s)	6.7	6.6	5.5	5.3	6.0	6.0
Degree Utilization, x	0.03	0.16	0.66	0.79	0.43	0.41
Capacity (veh/h)	500	514	636	661	577	583
Control Delay (s)	9.9	10.8	17.5	24.1	12.3	11.9
Approach Delay (s)	9.9	10.8	21.1		12.1	
Approach LOS	A	B	C		B	

Intersection Summary					
Delay	17.6				
HCM Level of Service	C				
Intersection Capacity Utilization	47.4%	ICU Level of Service		A	
Analysis Period (min)	15				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	352	375	293	448	8	375	5	156	1	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.95	1.00		0.98	
Satd. Flow (prot)	1770	1863	1583	1770	1858			1775	1583		1750	
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.95	1.00		0.98	
Satd. Flow (perm)	1770	1863	1583	1770	1858			1775	1583		1750	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	2	391	417	326	498	9	417	6	173	1	1	1
RTOR Reduction (vph)	0	0	271	0	1	0	0	0	124	0	1	0
Lane Group Flow (vph)	2	391	146	326	506	0	0	423	49	0	2	0
Turn Type	Prot		Prot	Prot			Split		Prot	Split		
Protected Phases	7	4	4	3	8		2	2	2	6	6	
Permitted Phases												
Actuated Green, G (s)	0.8	22.3	22.3	16.7	38.2			21.9	21.9		1.1	
Effective Green, g (s)	0.8	22.3	22.3	16.7	38.2			21.9	21.9		1.1	
Actuated g/C Ratio	0.01	0.29	0.29	0.21	0.49			0.28	0.28		0.01	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	18	533	453	379	910			498	444		25	
v/s Ratio Prot	0.00	c0.21	0.09	c0.18	0.27			c0.24	0.03		c0.00	
v/s Ratio Perm												
v/c Ratio	0.11	0.73	0.32	0.86	0.56			0.85	0.11		0.08	
Uniform Delay, d1	38.2	25.2	21.9	29.5	14.0			26.5	20.8		38.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	2.7	5.2	0.4	17.7	0.7			12.8	0.1		1.4	
Delay (s)	41.0	30.4	22.3	47.2	14.7			39.3	20.9		39.3	
Level of Service	D	C	C	D	B			D	C		D	
Approach Delay (s)		26.2			27.4			33.9			39.3	
Approach LOS		C			C			C			D	

Intersection Summary				
HCM Average Control Delay	28.7	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.80			
Actuated Cycle Length (s)	78.0	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	72.5%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

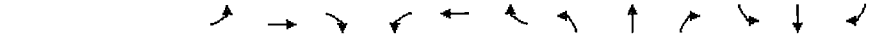
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Volume (vph)	397	299	0	204	288	281	436
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00		1.00	1.00	1.00	0.95
Frt	1.00	0.85		1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00		1.00	1.00	0.95	1.00
Satd. Flow (prot)	3433	1583		1863	1583	1770	3539
Flt Permitted	0.95	1.00		1.00	1.00	0.95	1.00
Satd. Flow (perm)	3433	1583		1863	1583	1770	3539
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	441	332	0	227	320	312	484
RTOR Reduction (vph)	0	248	0	0	244	0	0
Lane Group Flow (vph)	441	84	0	227	76	312	484
Turn Type		Perm	Prot		Perm	Prot	
Protected Phases	1		3	8		7	
Permitted Phases		1			8		6
Actuated Green, G (s)	12.9	12.9		12.1	12.1	14.0	12.9
Effective Green, g (s)	12.9	12.9		12.1	12.1	14.0	12.9
Actuated g/C Ratio	0.25	0.25		0.24	0.24	0.27	0.25
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	868	400		442	376	486	895
v/s Ratio Prot	0.13			c0.12		c0.18	
v/s Ratio Perm		0.05			0.05		c0.14
v/c Ratio	0.51	0.21		0.51	0.20	0.64	0.54
Uniform Delay, d1	16.3	15.0		16.9	15.6	16.3	16.5
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5	0.3		1.0	0.3	2.9	0.7
Delay (s)	16.8	15.3		17.9	15.8	19.2	17.2
Level of Service	B	B		B	B	B	B
Approach Delay (s)	16.2			16.7			18.0
Approach LOS	B			B			B

Intersection Summary				
HCM Average Control Delay	17.0	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.57			
Actuated Cycle Length (s)	51.0	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	47.6%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Volume (vph)	84	7	0	463	50	3	842
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0		4.0	4.0
Lane Util. Factor	0.97			0.95		1.00	0.95
Frt	0.99			0.99		1.00	1.00
Flt Protected	0.96			1.00		0.95	1.00
Satd. Flow (prot)	3414			3487		1770	3539
Flt Permitted	0.96			1.00		0.95	1.00
Satd. Flow (perm)	3414			3487		1770	3539
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	93	8	0	514	56	3	936
RTOR Reduction (vph)	7	0	0	13	0	0	0
Lane Group Flow (vph)	94	0	0	557	0	3	936
Turn Type			Prot			Prot	
Protected Phases	8		5	2		1	6
Permitted Phases							
Actuated Green, G (s)	3.1			14.9		0.6	19.5
Effective Green, g (s)	3.1			14.9		0.6	19.5
Actuated g/C Ratio	0.10			0.49		0.02	0.64
Clearance Time (s)	4.0			4.0		4.0	4.0
Vehicle Extension (s)	3.0			3.0		3.0	3.0
Lane Grp Cap (vph)	346			1698		35	2255
v/s Ratio Prot	c0.03			0.16		0.00	c0.26
v/s Ratio Perm							
v/c Ratio	0.27			0.33		0.09	0.42
Uniform Delay, d1	12.7			4.8		14.7	2.7
Progression Factor	1.00			1.00		1.00	1.00
Incremental Delay, d2	0.4			0.1		1.1	0.1
Delay (s)	13.1			4.9		15.8	2.9
Level of Service	B			A		B	A
Approach Delay (s)	13.1			4.9			2.9
Approach LOS	B			A			A

Intersection Summary			
HCM Average Control Delay	4.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	30.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	111	19	65	82	149	6	320	18	160	692	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	0.90		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1822		1770	1682		1770	3511		1770	3470	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1822		1770	1682		1770	3511		1770	3470	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	26	123	21	72	91	166	7	356	20	178	769	116
RTOR Reduction (vph)	0	11	0	0	114	0	0	6	0	0	17	0
Lane Group Flow (vph)	26	133	0	72	143	0	7	370	0	178	868	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	0.7	10.6		2.3	12.2		0.7	14.0		6.8	20.1	
Effective Green, g (s)	0.7	10.6		2.3	12.2		0.7	14.0		6.8	20.1	
Actuated g/C Ratio	0.01	0.21		0.05	0.25		0.01	0.28		0.14	0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	25	389		82	413		25	989		242	1403	
v/s Ratio Prot	0.01	0.07		c0.04	c0.09		0.00	0.11		c0.10	c0.25	
v/s Ratio Perm												
v/c Ratio	1.04	0.34		0.88	0.35		0.28	0.37		0.74	0.62	
Uniform Delay, d1	24.5	16.6		23.6	15.5		24.3	14.3		20.6	11.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	192.8	0.5		59.9	0.5		6.0	0.2		11.0	0.8	
Delay (s)	217.3	17.1		83.4	16.0		30.3	14.6		31.6	12.6	
Level of Service	F	B		F	B		C	B		C	B	
Approach Delay (s)		47.7			30.7			14.9			15.8	
Approach LOS		D			C			B			B	

Intersection Summary			
HCM Average Control Delay	20.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	49.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	83	70	95	137	36	40	341	57	41	781	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.97		1.00	0.98		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1805		1770	3464		1770	3534	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1583	1770	1805		1770	3464		1770	3534	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	6	92	78	106	152	40	44	379	63	46	868	8
RTOR Reduction (vph)	0	0	64	0	17	0	0	20	0	0	1	0
Lane Group Flow (vph)	6	92	14	106	175	0	44	422	0	46	875	0
Turn Type	Prot		Prot	Prot			Prot			Prot		
Protected Phases	7	4	4	3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	0.6	8.4	8.4	3.5	11.3		1.3	17.6		1.3	17.6	
Effective Green, g (s)	0.6	8.4	8.4	3.5	11.3		1.3	17.6		1.3	17.6	
Actuated g/C Ratio	0.01	0.18	0.18	0.07	0.24		0.03	0.38		0.03	0.38	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	23	334	284	132	436		49	1303		49	1329	
v/s Ratio Prot	0.00	0.05	0.01	c0.06	c0.10		0.02	0.12		c0.03	c0.25	
v/s Ratio Perm												
v/c Ratio	0.26	0.28	0.05	0.80	0.40		0.90	0.32		0.94	0.66	
Uniform Delay, d1	22.9	16.6	15.9	21.3	14.9		22.7	10.4		22.7	12.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	6.0	0.5	0.1	28.6	0.6		90.0	0.1		104.4	1.2	
Delay (s)	28.8	17.0	16.0	49.9	15.5		112.7	10.5		127.1	13.3	
Level of Service	C	B	B	D	B		F	B		F	B	
Approach Delay (s)		17.0			27.7			19.8			19.0	
Approach LOS		B			C			B			B	

Intersection Summary				
HCM Average Control Delay	20.4	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.62			
Actuated Cycle Length (s)	46.8	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	47.1%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	93	862	23	97	865	206	68	56	90	452	22	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.95			1.00	1.00	0.95	0.95	
Frt	1.00	1.00		1.00	0.97			1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00	0.95	0.97	
Satd. Flow (prot)	1770	5065		1770	3437			1813	1583	1681	1640	
Flt Permitted	0.95	1.00		0.95	1.00			0.97	1.00	0.95	0.97	
Satd. Flow (perm)	1770	5065		1770	3437			1813	1583	1681	1640	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	103	958	26	108	961	229	76	62	100	502	24	91
RTOR Reduction (vph)	0	3	0	0	22	0	0	0	86	0	17	0
Lane Group Flow (vph)	103	981	0	108	1168	0	0	138	14	311	289	0
Turn Type	Prot			Prot			Split		Perm	Split		
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases									2			
Actuated Green, G (s)	6.4	30.0		8.4	32.0			11.6	11.6	17.8	17.8	
Effective Green, g (s)	6.4	30.0		8.4	32.0			11.6	11.6	17.8	17.8	
Actuated g/C Ratio	0.08	0.36		0.10	0.38			0.14	0.14	0.21	0.21	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	135	1813		177	1312			251	219	357	348	
v/s Ratio Prot	c0.06	0.19		0.06	c0.34			c0.08		c0.18	0.18	
v/s Ratio Perm									0.01			
v/c Ratio	0.76	0.54		0.61	0.89			0.55	0.06	0.87	0.83	
Uniform Delay, d1	38.0	21.4		36.1	24.3			33.7	31.4	31.9	31.6	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2	22.2	0.3		6.1	7.9			2.5	0.1	20.1	15.5	
Delay (s)	60.1	21.8		42.2	32.2			36.1	31.5	52.0	47.0	
Level of Service	E	C		D	C			D	C	D	D	
Approach Delay (s)		25.4			33.0			34.2			49.5	
Approach LOS		C			C			C			D	

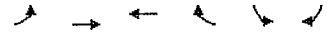
Intersection Summary				
HCM Average Control Delay	33.7	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.77			
Actuated Cycle Length (s)	83.8	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	67.9%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑			↑↑		↱
Volume (veh/h)	1417	53	0	1384	0	139
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	1574	59	0	1538	0	154
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	575			607		
pX, platoon unblocked			0.87		0.82	0.87
vC, conflicting volume			1633		2373	554
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1190		1256	0
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	84
cM capacity (veh/h)			504		134	939

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1
Volume Total	630	630	374	769	769	154
Volume Left	0	0	0	0	0	0
Volume Right	0	0	59	0	0	154
cSH	1700	1700	1700	1700	1700	939
Volume to Capacity	0.37	0.37	0.22	0.45	0.45	0.16
Queue Length 95th (ft)	0	0	0	0	0	15
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	9.6
Lane LOS						A
Approach Delay (s)	0.0			0.0		9.6
Approach LOS						A

Intersection Summary				
Average Delay	0.4			
Intersection Capacity Utilization	43.8%	ICU Level of Service		A
Analysis Period (min)	15			



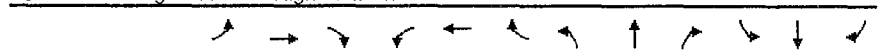
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↰↰↱	↱
Volume (vph)	0	787	1050	0	945	326
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		0.97	0.91
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3539	3539		3430	1441
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3539	3539		3430	1441
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	874	1167	0	1050	362
RTOR Reduction (vph)	0	0	0	0	2	19
Lane Group Flow (vph)	0	874	1167	0	1084	307
Turn Type						Prot
Protected Phases		4	8		6	6
Permitted Phases						
Actuated Green, G (s)		49.8	49.8		62.2	62.2
Effective Green, g (s)		49.8	49.8		62.2	62.2
Actuated g/C Ratio		0.42	0.42		0.52	0.52
Clearance Time (s)		4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1469	1469		1778	747
v/s Ratio Prot		0.25	c0.33		c0.32	0.21
v/s Ratio Perm						
v/c Ratio		0.59	0.79		0.61	0.41
Uniform Delay, d1		27.3	30.6		20.4	17.7
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		0.7	3.1		1.6	1.7
Delay (s)		27.9	33.7		21.9	19.4
Level of Service		C	C		C	B
Approach Delay (s)		27.9	33.7		21.3	
Approach LOS		C	C		C	

Intersection Summary			
HCM Average Control Delay	27.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	65.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	224	1488	0	0	1558	930	373	0	955	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	0.97	0.95			0.91	1.00	0.95	0.91	0.95			
Frt	1.00	1.00			1.00	0.85	1.00	0.86	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (prot)	3433	3539			5085	1583	1681	1454	1504			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (perm)	3433	3539			5085	1583	1681	1454	1504			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	249	1653	0	0	1731	1033	414	0	1061	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	440	0	12	12	0	0	0
Lane Group Flow (vph)	249	1653	0	0	1731	593	373	538	540	0	0	0
Turn Type	Prot					Prot	Split		Prot			
Protected Phases	7	4			8	8	2	2	2			
Permitted Phases												
Actuated Green, G (s)	10.0	67.0			53.0	53.0	45.0	45.0	45.0			
Effective Green, g (s)	10.0	67.0			53.0	53.0	45.0	45.0	45.0			
Actuated g/C Ratio	0.08	0.56			0.44	0.44	0.38	0.38	0.38			
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0			
Lane Grp Cap (vph)	286	1976			2246	699	630	545	564			
v/s Ratio Prot	0.07	c0.47			0.34	0.37	0.22	c0.37	0.36			
v/s Ratio Perm												
v/c Ratio	0.87	0.84			0.77	0.85	0.59	0.99	0.96			
Uniform Delay, d1	54.4	22.0			28.4	29.9	30.1	37.2	36.6			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	23.8	3.3			1.7	9.4	4.1	35.6	28.8			
Delay (s)	78.2	25.2			30.0	39.3	34.2	72.8	65.3			
Level of Service	E	C			C	D	C	E	E			
Approach Delay (s)		32.1			33.5			60.2			0.0	
Approach LOS		C			C			E			A	

Intersection Summary				
HCM Average Control Delay	39.5	HCM Level of Service	D	
HCM Volume to Capacity ratio	0.90			
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	94.1%	ICU Level of Service	F	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	108	1595	674	107	1980	74	195	10	45	111	57	303
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		0.97	0.95		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.88		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5058		3433	3104		1770	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5058		3433	3104		1770	1863	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	120	1772	749	119	2200	82	217	11	50	123	63	337
RTOR Reduction (vph)	0	0	375	0	4	0	0	43	0	0	0	136
Lane Group Flow (vph)	120	1772	374	119	2278	0	217	18	0	123	63	201
Turn Type	Prot		Prot	Prot			Prot			Prot		Prot
Protected Phases	7	4	4	3	8		5	2		1	6	6
Permitted Phases												
Actuated Green, G (s)	7.9	39.6	39.6	8.5	40.2		7.0	12.1		10.2	15.3	15.3
Effective Green, g (s)	7.9	39.6	39.6	8.5	40.2		7.0	12.1		10.2	15.3	15.3
Actuated g/C Ratio	0.09	0.46	0.46	0.10	0.47		0.08	0.14		0.12	0.18	0.18
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	162	2331	726	174	2353		278	435		209	330	280
v/s Ratio Prot	c0.07	0.35	0.24	0.07	c0.45		c0.06	0.01		0.07	0.03	c0.13
v/s Ratio Perm												
v/c Ratio	0.74	0.76	0.52	0.68	0.97		0.78	0.04		0.59	0.19	0.72
Uniform Delay, d1	38.3	19.5	16.6	37.7	22.5		38.9	32.1		36.1	30.3	33.5
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	16.6	1.5	0.6	10.6	11.9		13.2	0.0		4.2	0.3	8.5
Delay (s)	54.8	21.0	17.2	48.2	34.3		52.2	32.2		40.3	30.6	42.0
Level of Service	D	C	B	D	C		D	C		D	C	D
Approach Delay (s)		21.4			35.0			47.8			40.3	
Approach LOS		C			D			D			D	

Intersection Summary				
HCM Average Control Delay	30.0	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.82			
Actuated Cycle Length (s)	86.4	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	74.2%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↱	↰	↑↑↑	↰↰	↱
Volume (vph)	1559	192	150	2083	88	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	5085	1583	1770	5085	3433	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	5085	1583	1770	5085	3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1695	209	163	2264	96	74
RTOR Reduction (vph)	0	100	0	0	0	66
Lane Group Flow (vph)	1695	109	163	2264	96	8
Turn Type		Perm	Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	25.4	25.4	6.0	35.4	5.3	5.3
Effective Green, g (s)	25.4	25.4	6.0	35.4	5.3	5.3
Actuated g/C Ratio	0.52	0.52	0.12	0.73	0.11	0.11
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2652	826	218	3696	374	172
v/s Ratio Prot	0.33		0.09	c0.45	c0.03	
v/s Ratio Perm		0.07				0.01
v/c Ratio	0.64	0.13	0.75	0.61	0.26	0.05
Uniform Delay, d1	8.4	6.0	20.6	3.3	19.9	19.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5	0.1	13.1	0.3	0.4	0.1
Delay (s)	8.9	6.1	33.7	3.6	20.3	19.6
Level of Service	A	A	C	A	C	B
Approach Delay (s)	8.6			5.6	20.0	
Approach LOS	A			A	B	

Intersection Summary				
HCM Average Control Delay	7.4	HCM Level of Service	A	
HCM Volume to Capacity ratio	0.57			
Actuated Cycle Length (s)	48.7	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	51.8%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↱	↰↰	↑↑↑	↰	↱
Volume (vph)	1467	160	160	2160	73	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	0.97	0.91	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	5085	1583	3433	5085	1770	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	5085	1583	3433	5085	1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1595	174	174	2348	79	79
RTOR Reduction (vph)	0	82	0	0	0	69
Lane Group Flow (vph)	1595	92	174	2348	79	10
Turn Type		Perm	Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	24.6	24.6	3.8	32.4	6.1	6.1
Effective Green, g (s)	24.6	24.6	3.8	32.4	6.1	6.1
Actuated g/C Ratio	0.53	0.53	0.08	0.70	0.13	0.13
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2690	837	281	3543	232	208
v/s Ratio Prot	0.31		0.05	c0.46	c0.04	
v/s Ratio Perm		0.06				0.01
v/c Ratio	0.59	0.11	0.62	0.66	0.34	0.05
Uniform Delay, d1	7.5	5.5	20.7	4.0	18.4	17.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.1	4.0	0.5	0.9	0.1
Delay (s)	7.9	5.5	24.7	4.4	19.2	17.8
Level of Service	A	A	C	A	B	B
Approach Delay (s)	7.6			5.8	18.5	
Approach LOS	A			A	B	

Intersection Summary				
HCM Average Control Delay	7.0	HCM Level of Service	A	
HCM Volume to Capacity ratio	0.61			
Actuated Cycle Length (s)	46.5	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	52.4%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	233	989	323	252	1586	92	286	109	95	159	308	448
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.91		0.97	0.91		0.97	0.91	1.00	0.97	0.91	
Frt	1.00	0.96		1.00	0.99		1.00	1.00	0.85	1.00	0.91	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	4897		3433	5044		3433	5085	1583	3433	4633	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3433	4897		3433	5044		3433	5085	1583	3433	4633	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	259	1099	359	280	1762	102	318	121	106	177	342	498
RTOR Reduction (vph)	0	64	0	0	7	0	0	0	82	0	156	0
Lane Group Flow (vph)	259	1394	0	280	1857	0	318	121	24	177	684	0
Turn Type	Prot			Prot			Prot		Prot	Prot		
Protected Phases	7	4		3	8		5	2	2	1	6	
Permitted Phases												
Actuated Green, G (s)	9.0	33.8		10.2	35.0		10.2	19.8	19.8	8.5	18.1	
Effective Green, g (s)	9.0	33.8		10.2	35.0		10.2	19.8	19.8	8.5	18.1	
Actuated g/C Ratio	0.10	0.38		0.12	0.40		0.12	0.22	0.22	0.10	0.20	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	350	1875		397	1999		397	1140	355	330	950	
v/s Ratio Prot	0.08	0.28		c0.08	c0.37		c0.09	0.02	0.02	0.05	c0.15	
v/s Ratio Perm												
v/c Ratio	0.74	0.74		0.71	0.93		0.80	0.11	0.07	0.54	1.04dr	
Uniform Delay, d1	38.5	23.5		37.6	25.5		38.1	27.2	27.0	38.0	32.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	8.2	1.6		5.6	8.2		11.0	0.0	0.1	1.7	2.7	
Delay (s)	46.7	25.1		43.2	33.7		49.1	27.3	27.1	39.7	35.4	
Level of Service	D	C		D	C		D	C	C	D	D	
Approach Delay (s)		28.4			34.9			40.0			36.2	
Approach LOS		C			C			D			D	

Intersection Summary				
HCM Average Control Delay	33.6	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.80			
Actuated Cycle Length (s)	88.3	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	76.9%	ICU Level of Service	D	
Analysis Period (min)	15			

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	158	655	316	272	1247	169	443	183	108	142	180	157
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	0.97	0.91		0.97	0.91		0.97	0.91		1.00	0.95	
Frt	1.00	0.95		1.00	0.98		1.00	0.94		1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	4837		3433	4994		3433	4802		1770	3292	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	4837		3433	4994		3433	4802		1770	3292	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	176	728	351	302	1386	188	492	203	120	158	200	174
RTOR Reduction (vph)	0	103	0	0	20	0	0	98	0	0	149	0
Lane Group Flow (vph)	176	976	0	302	1554	0	492	225	0	158	225	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	6.0	22.6		9.5	26.1		12.8	12.9		10.0	10.1	
Effective Green, g (s)	6.0	22.6		9.5	26.1		12.8	12.9		10.0	10.1	
Actuated g/C Ratio	0.08	0.32		0.13	0.37		0.18	0.18		0.14	0.14	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	290	1540		459	1836		619	872		249	468	
v/s Ratio Prot	0.05	0.20		c0.09	c0.31		c0.14	c0.05		0.09	c0.07	
v/s Ratio Perm												
v/c Ratio	0.61	0.63		0.66	0.85		0.79	0.26		0.63	0.48	
Uniform Delay, d1	31.4	20.7		29.2	20.6		27.8	24.9		28.8	28.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	3.6	0.9		3.4	3.8		7.0	0.2		5.2	0.8	
Delay (s)	34.9	21.5		32.6	24.4		34.8	25.1		34.0	28.8	
Level of Service	C	C		C	C		C	C		C	C	
Approach Delay (s)		23.4			25.7			31.0			30.3	
Approach LOS		C			C			C			C	

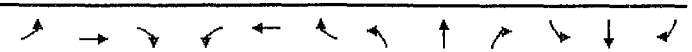
Intersection Summary				
HCM Average Control Delay	26.6	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.81			
Actuated Cycle Length (s)	71.0	Sum of lost time (s)	20.0	
Intersection Capacity Utilization	68.4%	ICU Level of Service	C	
Analysis Period (min)	15			

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	206	663	132	79	1089	210	120	151	11	54	60	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.99		1.00	0.90	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	4958		1770	4962		1770	1844		1770	1674	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	4958		1770	4962		1770	1844		1770	1674	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	229	737	147	88	1210	233	133	168	12	60	67	139
RTOR Reduction (vph)	0	33	0	0	34	0	0	3	0	0	102	0
Lane Group Flow (vph)	229	851	0	88	1409	0	133	177	0	60	104	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	12.3	30.5		6.9	25.1		7.9	16.0		4.0	12.1	
Effective Green, g (s)	12.3	30.5		6.9	25.1		7.9	16.0		4.0	12.1	
Actuated g/C Ratio	0.17	0.42		0.09	0.34		0.11	0.22		0.05	0.16	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	297	2060		166	1697		191	402		96	276	
v/s Ratio Prot	c0.13	0.17		0.05	c0.28		c0.08	c0.10		0.03	0.06	
v/s Ratio Perm												
v/c Ratio	0.77	0.41		0.53	0.83		0.70	0.44		0.62	0.38	
Uniform Delay, d1	29.2	15.1		31.7	22.2		31.6	24.8		34.0	27.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	11.7	0.1		3.2	3.6		10.5	0.8		12.0	0.9	
Delay (s)	40.9	15.3		34.9	25.8		42.1	25.6		46.0	28.2	
Level of Service	D	B		C	C		D	C		D	C	
Approach Delay (s)		20.5			26.3			32.6			32.2	
Approach LOS		C			C			C			C	

Intersection Summary				
HCM Average Control Delay	25.4	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.72			
Actuated Cycle Length (s)	73.4	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	68.0%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	165	570	34	65	1121	35	43	25	53	48	58	359
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	1.00		1.00	0.90		1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5042		1770	5062		1770	1673		1770	1622	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	5042		1770	5062		1770	1673		1770	1622	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	183	633	38	72	1246	39	48	28	59	53	64	399
RTOR Reduction (vph)	0	7	0	0	4	0	0	49	0	0	259	0
Lane Group Flow (vph)	183	664	0	72	1281	0	48	38	0	53	204	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	10.2	29.5		4.4	23.7		2.4	11.4		3.4	12.4	
Effective Green, g (s)	10.2	29.5		4.4	23.7		2.4	11.4		3.4	12.4	
Actuated g/C Ratio	0.16	0.46		0.07	0.37		0.04	0.18		0.05	0.19	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	279	2299		120	1854		66	295		93	311	
v/s Ratio Prot	c0.10	0.13		0.04	c0.25		0.03	0.02		c0.03	c0.13	
v/s Ratio Perm												
v/c Ratio	0.66	0.29		0.60	0.69		0.73	0.13		0.57	0.66	
Uniform Delay, d1	25.6	11.0		29.3	17.4		30.8	22.5		29.9	24.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	5.5	0.1		8.2	1.1		32.6	0.2		7.8	4.9	
Delay (s)	31.1	11.1		37.5	18.5		63.5	22.7		37.7	29.1	
Level of Service	C	B		D	B		E	C		D	C	
Approach Delay (s)		15.4			19.5			37.2			30.0	
Approach LOS		B			B			D			C	

Intersection Summary				
HCM Average Control Delay	21.0	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.63			
Actuated Cycle Length (s)	64.7	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	73.4%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	558	129	385	999	270	332
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.91		1.00	0.91	0.97	1.00
Frt	0.97		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	4942		1770	5085	3433	1583
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	4942		1770	5085	3433	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	620	143	428	1110	300	369
RTOR Reduction (vph)	64	0	0	0	0	294
Lane Group Flow (vph)	699	0	428	1110	300	75
Turn Type			Prot			Prot
Protected Phases	4		3	8	2	2
Permitted Phases						
Actuated Green, G (s)	13.7		15.2	32.9	10.4	10.4
Effective Green, g (s)	13.7		15.2	32.9	10.4	10.4
Actuated g/C Ratio	0.27		0.30	0.64	0.20	0.20
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1320		524	3261	696	321
v/s Ratio Prot	c0.14		c0.24	0.22	c0.09	0.05
v/s Ratio Perm						
v/c Ratio	0.53		0.82	0.34	0.43	0.23
Uniform Delay, d1	16.0		16.8	4.2	17.9	17.1
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4		9.6	0.1	0.4	0.4
Delay (s)	16.4		26.3	4.3	18.3	17.5
Level of Service	B		C	A	B	B
Approach Delay (s)	16.4			10.4	17.8	
Approach LOS	B			B	B	

Intersection Summary				
HCM Average Control Delay	13.6	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.61			
Actuated Cycle Length (s)	51.3	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	52.7%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	73	15	15	94	32	107	160	313	98	175	636	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.95	0.95			1.00	1.00	0.97	0.91		0.97	0.91	1.00
Frt	1.00	0.96			1.00	0.85	1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	0.98			0.96	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1657			1796	1583	3433	4903		3433	5085	1583
Flt Permitted	0.28	0.34			0.96	1.00	0.37	1.00		0.95	1.00	1.00
Satd. Flow (perm)	502	573			1796	1583	1342	4903		3433	5085	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	81	17	17	104	36	119	178	348	109	194	707	71
RTOR Reduction (vph)	0	13	0	0	0	99	0	70	0	0	0	43
Lane Group Flow (vph)	58	44	0	0	140	20	178	387	0	194	707	28
Turn Type	Perm			Split		Perm	Perm			Prot		Perm
Protected Phases		2		6	6			8		7	4	
Permitted Phases	2					6	8					4
Actuated Green, G (s)	14.1	14.1			10.3	10.3	13.6	13.6		6.7	24.3	24.3
Effective Green, g (s)	14.1	14.1			10.3	10.3	13.6	13.6		6.7	24.3	24.3
Actuated g/C Ratio	0.23	0.23			0.17	0.17	0.22	0.22		0.11	0.40	0.40
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	117	133			305	269	301	1099		379	2036	634
v/s Ratio Prot					c0.08			0.08		c0.06	0.14	
v/s Ratio Perm	c0.12	0.08				0.01	c0.13					0.02
v/c Ratio	0.50	0.33			0.46	0.08	0.59	0.35		0.51	0.35	0.04
Uniform Delay, d1	20.2	19.4			22.7	21.2	21.1	19.8		25.5	12.7	11.1
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	3.3	1.5			1.1	0.1	3.1	0.2		1.2	0.1	0.0
Delay (s)	23.5	20.8			23.8	21.3	24.2	20.0		26.6	12.8	11.1
Level of Service	C	C			C	C	C	C		C	B	B
Approach Delay (s)		22.2			22.7			21.2			15.4	
Approach LOS		C			C			C			B	

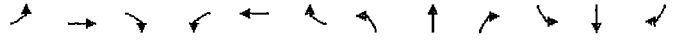
Intersection Summary				
HCM Average Control Delay	18.6	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.52			
Actuated Cycle Length (s)	60.7	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	40.4%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	171	83	113	45	189	149	111	449	7	100	472	172
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.93		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1739		1770	3531		1770	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	1863	1583	1770	1739		1770	3531		1770	3539	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	190	92	126	50	210	166	123	499	8	111	524	191
RTOR Reduction (vph)	0	0	77	0	36	0	0	2	0	0	0	148
Lane Group Flow (vph)	190	92	49	50	340	0	123	505	0	111	524	43
Turn Type	Prot		Prot	Prot			Prot			Prot		Prot
Protected Phases	7	4	4	3	8		5	2		1	6	6
Permitted Phases												
Actuated Green, G (s)	12.2	26.5	26.5	3.5	17.8		7.1	16.5		6.1	15.5	15.5
Effective Green, g (s)	12.2	26.5	26.5	3.5	17.8		7.1	16.5		6.1	15.5	15.5
Actuated g/C Ratio	0.18	0.39	0.39	0.05	0.26		0.10	0.24		0.09	0.23	0.23
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	315	720	612	90	451		183	849		157	800	358
v/s Ratio Prot	c0.11	0.05	0.03	0.03	c0.20		c0.07	0.14		0.06	c0.15	0.03
v/s Ratio Perm												
v/c Ratio	0.60	0.13	0.08	0.56	0.75		0.67	0.60		0.71	0.66	0.12
Uniform Delay, d1	26.0	13.6	13.3	31.8	23.4		29.6	23.1		30.4	24.1	21.1
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	3.2	0.1	0.1	7.2	7.0		9.3	1.1		13.5	1.9	0.2
Delay (s)	29.2	13.7	13.4	39.0	30.4		39.0	24.2		43.9	26.1	21.3
Level of Service	C	B	B	D	C		D	C		D	C	C
Approach Delay (s)		20.8			31.4			27.1			27.4	
Approach LOS		C			C			C			C	

Intersection Summary				
HCM Average Control Delay	26.9	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.68			
Actuated Cycle Length (s)	68.6	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	61.1%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

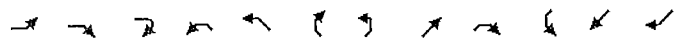
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	38	67	6	226	45	147	14	344	52	160	500	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.91		1.00	0.91	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1839		1770	1863	1583	1770	4985		1770	4997	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1839		1770	1863	1583	1770	4985		1770	4997	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	42	74	7	251	50	163	16	382	58	178	556	73
RTOR Reduction (vph)	0	5	0	0	0	118	0	29	0	0	20	0
Lane Group Flow (vph)	42	76	0	251	50	45	16	411	0	178	609	0
Turn Type	Prot			Prot		Prot	Prot			Prot		
Protected Phases	1	6		5	2	2	7	4		3	8	
Permitted Phases												
Actuated Green, G (s)	2.0	5.4		11.6	15.0	15.0	0.7	13.6		8.3	21.2	
Effective Green, g (s)	2.0	5.4		11.6	15.0	15.0	0.7	13.6		8.3	21.2	
Actuated g/C Ratio	0.04	0.10		0.21	0.27	0.27	0.01	0.25		0.15	0.39	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	64	181		374	509	433	23	1235		268	1930	
v/s Ratio Prot	0.02	c0.04		c0.14	0.03	0.03	0.01	0.08		c0.10	c0.12	
v/s Ratio Perm												
v/c Ratio	0.66	0.42		0.67	0.10	0.10	0.70	0.33		0.66	0.32	
Uniform Delay, d1	26.1	23.3		19.9	14.9	14.9	27.0	16.9		22.0	11.8	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	21.7	1.6		4.7	0.1	0.1	63.9	0.2		6.1	0.1	
Delay (s)	47.8	24.8		24.6	15.0	15.0	90.9	17.1		28.1	11.9	
Level of Service	D	C		C	B	B	F	B		C	B	
Approach Delay (s)		32.7			20.2			19.7			15.4	
Approach LOS		C			C			B			B	

Intersection Summary				
HCM Average Control Delay	18.8	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.48			
Actuated Cycle Length (s)	54.9	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	45.9%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	311	118	123	60	291	29	269	425	28	66	416	397
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85		0.99		1.00	0.99		1.00	0.93	
Flt Protected	0.95	1.00	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583		1829		1770	3507		1770	3280	
Flt Permitted	0.95	1.00	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1583		1829		1770	3507		1770	3280	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	327	124	129	63	306	31	283	447	29	69	438	418
RTOR Reduction (vph)	0	0	103	0	4	0	0	6	0	0	214	0
Lane Group Flow (vph)	327	124	26	0	396	0	283	470	0	69	642	0
Turn Type	Split		Prot	Split			Prot			Prot		
Protected Phases	4	4	4	8	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	16.2	16.2	16.2		17.4		13.2	24.3		6.6	17.7	
Effective Green, g (s)	16.2	16.2	16.2		17.4		13.2	24.3		6.6	17.7	
Actuated g/C Ratio	0.20	0.20	0.20		0.22		0.16	0.30		0.08	0.22	
Clearance Time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	356	375	319		395		290	1059		145	721	
v/s Ratio Prot	c0.18	0.07	0.02		c0.22		c0.16	0.13		0.04	c0.20	
v/s Ratio Perm												
v/c Ratio	0.92	0.33	0.08		1.00		0.98	0.44		0.48	0.89	
Uniform Delay, d1	31.5	27.5	26.1		31.6		33.5	22.7		35.3	30.5	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	27.8	0.5	0.1		46.0		45.8	0.3		2.5	13.2	
Delay (s)	59.3	28.0	26.2		77.5		79.3	23.0		37.8	43.7	
Level of Service	E	C	C		E		E	C		D	D	
Approach Delay (s)		45.2			77.5			44.0			43.2	
Approach LOS		D			E			D			D	

Intersection Summary				
HCM Average Control Delay	49.0	HCM Level of Service	D	
HCM Volume to Capacity ratio	0.94			
Actuated Cycle Length (s)	80.5	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	90.1%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	EBL	EBR	EBR2	NWL2	NWL	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	30	110	245	94	221	106	212	338	29	88	904	107
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.97		0.97	0.91		1.00	0.91	
Frt	1.00	0.85	0.85	1.00	0.95		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1583	1583	1770	3326		3433	5025		1770	5004	
Flt Permitted	0.95	1.00	1.00	0.95	0.97		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1583	1583	1770	3326		3433	5025		1770	5004	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	33	122	272	104	246	118	236	376	32	98	1004	119
RTOR Reduction (vph)	0	0	200	0	101	0	0	16	0	0	24	0
Lane Group Flow (vph)	33	122	72	104	263	0	236	392	0	98	1099	0
Turn Type		Perm	Perm	Split			Prot			Prot		
Protected Phases	2			6	6		3	8		7	4	
Permitted Phases		2	2									
Actuated Green, G (s)	15.9	15.9	15.9	5.8	5.8		5.0	16.5		5.8	17.3	
Effective Green, g (s)	15.9	15.9	15.9	5.8	5.8		5.0	16.5		5.8	17.3	
Actuated g/C Ratio	0.26	0.26	0.26	0.10	0.10		0.08	0.28		0.10	0.29	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	469	419	419	171	322		286	1382		171	1443	
v/s Ratio Prot	0.02			0.06	c0.08		c0.07	0.08		0.06	c0.22	
v/s Ratio Perm		c0.08	0.05									
v/c Ratio	0.07	0.29	0.17	0.61	0.82		0.83	0.28		0.57	0.76	
Uniform Delay, d1	16.5	17.6	17.0	26.0	26.6		27.1	17.1		25.9	19.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	1.8	0.9	6.0	14.7		17.3	0.1		4.6	2.4	
Delay (s)	16.8	19.3	17.9	32.0	41.3		44.4	17.2		30.5	21.9	
Level of Service	B	B	B	C	D		D	B		C	C	
Approach Delay (s)	18.2				39.2			27.2			22.6	
Approach LOS	B				D			C			C	

Intersection Summary				
HCM Average Control Delay	25.8	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.56			
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	52.2%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	54	6	75	13	26	14	126	30	2	3	16	196
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	60	7	83	14	29	16	140	33	2	3	18	218

Direction, Lane #	SE 1	SE 2	NW 1	NE 1	SW 1
Volume Total (vph)	67	83	59	176	239
Volume Left (vph)	60	0	14	140	3
Volume Right (vph)	0	83	16	2	218
Hadj (s)	0.48	-0.67	-0.08	0.19	-0.51
Departure Headway (s)	6.0	4.9	5.1	4.9	4.2
Degree Utilization, x	0.11	0.11	0.08	0.24	0.28
Capacity (veh/h)	556	684	635	699	817
Control Delay (s)	8.6	7.3	8.6	9.4	8.7
Approach Delay (s)	7.8		8.6	9.4	8.7
Approach LOS	A		A	A	A

Intersection Summary				
Delay	8.7			
HCM Level of Service	A			
Intersection Capacity Utilization	41.5%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	52	89	116	199	61	24	30	296	81	15	771	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85		0.99		1.00	0.97		1.00	0.98	
Flt Protected		0.98	1.00		0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1829	1583		1779		1770	3425		1770	3457	
Flt Permitted		0.98	1.00		0.97		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1829	1583		1779		1770	3425		1770	3457	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	58	99	129	221	68	27	33	329	90	17	857	156
RTOR Reduction (vph)	0	0	107	0	5	0	0	30	0	0	19	0
Lane Group Flow (vph)	0	157	22	0	311	0	33	389	0	17	994	0
Turn Type	Split		Prot	Split			Prot			Prot		
Protected Phases	4	4	4	8	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)		10.7	10.7		14.4		1.5	21.5		0.7	20.7	
Effective Green, g (s)		10.7	10.7		14.4		1.5	21.5		0.7	20.7	
Actuated g/C Ratio		0.17	0.17		0.23		0.02	0.34		0.01	0.33	
Clearance Time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		309	268		405		42	1163		20	1130	
v/s Ratio Prot		c0.09	0.01		c0.18		c0.02	0.11		0.01	c0.29	
v/s Ratio Perm												
v/c Ratio		0.51	0.08		0.77		0.79	0.33		0.85	0.88	
Uniform Delay, d1		23.9	22.2		22.9		30.7	15.6		31.2	20.1	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.3	0.1		8.5		62.3	0.2		131.5	8.0	
Delay (s)		25.2	22.3		31.4		93.0	15.7		162.7	28.2	
Level of Service		C	C		C		F	B		F	C	
Approach Delay (s)		23.9			31.4			21.4			30.4	
Approach LOS		C			C			C			C	

Intersection Summary				
HCM Average Control Delay	27.7	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.76			
Actuated Cycle Length (s)	63.3	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	58.6%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	307	176	382	625	0	0	0	0	997	3	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		0.97	0.95					0.95	0.91	0.95
Frt		0.95		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.95	1.00
Satd. Flow (prot)		3345		3433	3539					1681	1610	1504
Flt Permitted		1.00		0.95	1.00					0.95	0.95	1.00
Satd. Flow (perm)		3345		3433	3539					1681	1610	1504
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	341	196	424	694	0	0	0	0	1108	3	160
RTOR Reduction (vph)	0	132	0	0	0	0	0	0	0	0	2	84
Lane Group Flow (vph)	0	405	0	424	694	0	0	0	0	565	560	60
Turn Type				Prot						Split		Prot
Protected Phases		4		3	8					6	6	6
Permitted Phases												
Actuated Green, G (s)		12.4		9.9	26.3					24.8	24.8	24.8
Effective Green, g (s)		12.4		9.9	26.3					24.8	24.8	24.8
Actuated g/C Ratio		0.21		0.17	0.45					0.42	0.42	0.42
Clearance Time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		702		575	1575					705	676	631
v/s Ratio Prot		c0.12		c0.12	0.20					0.34	c0.35	0.04
v/s Ratio Perm												
v/c Ratio		0.58		0.74	0.44					0.80	0.83	0.10
Uniform Delay, d1		21.0		23.4	11.3					15.0	15.3	10.4
Progression Factor		1.00		1.00	1.00					1.00	1.00	1.00
Incremental Delay, d2		1.2		4.9	0.2					6.5	8.3	0.1
Delay (s)		22.1		28.3	11.5					21.5	23.5	10.4
Level of Service		C		C	B					C	C	B
Approach Delay (s)		22.1			17.9			0.0			21.2	
Approach LOS		C			B			A			C	

Intersection Summary				
HCM Average Control Delay	20.1	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.74			
Actuated Cycle Length (s)	59.1	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	73.6%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	61	1188	0	0	935	834	106	2	547	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	0.97	0.95			0.95	1.00	0.95	0.91	0.95			
Frt	1.00	1.00			1.00	0.85	1.00	0.86	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (prot)	3433	3539			3539	1583	1681	1449	1504			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (perm)	3433	3539			3539	1583	1681	1449	1504			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	68	1320	0	0	1039	927	118	2	608	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	494	0	37	37	0	0	0
Lane Group Flow (vph)	68	1320	0	0	1039	433	106	275	273	0	0	0
Turn Type	Prot					Prot	Split		Prot			
Protected Phases	7	4			8	8	2	2	2			
Permitted Phases												
Actuated Green, G (s)	2.4	31.6			25.2	25.2	14.4	14.4	14.4			
Effective Green, g (s)	2.4	31.6			25.2	25.2	14.4	14.4	14.4			
Actuated g/C Ratio	0.04	0.59			0.47	0.47	0.27	0.27	0.27			
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0			
Lane Grp Cap (vph)	153	2071			1652	739	448	386	401			
v/s Ratio Prot	0.02	c0.37			0.29	0.27	0.06	c0.19	0.18			
v/s Ratio Perm												
v/c Ratio	0.44	0.64			0.63	0.59	0.24	0.71	0.68			
Uniform Delay, d1	25.2	7.4			10.9	10.6	15.5	17.9	17.7			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	2.1	0.7			0.8	1.2	0.3	6.1	4.7			
Delay (s)	27.2	8.1			11.6	11.8	15.8	24.1	22.5			
Level of Service	C	A			B	B	B	C	C			
Approach Delay (s)		9.0			11.7			22.2			0.0	
Approach LOS		A			B			C			A	

Intersection Summary				
HCM Average Control Delay	12.6	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.66			
Actuated Cycle Length (s)	54.0	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	73.6%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	6	16	704	14	165	69	921	145	126	1070	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.95	0.91	0.95	0.95	0.91	0.95	1.00	0.91		1.00	0.91	
Frt	1.00	0.97	0.85	1.00	0.99	0.85	1.00	0.98		1.00	1.00	
Flt Protected	0.95	0.98	1.00	0.95	0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1681	1617	1504	1681	1610	1504	1770	4982		1770	5073	
Flt Permitted	0.95	0.98	1.00	0.95	0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1681	1617	1504	1681	1610	1504	1770	4982		1770	5073	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	22	7	18	782	16	183	77	1023	161	140	1189	19
RTOR Reduction (vph)	0	3	14	0	2	110	0	21	0	0	1	0
Lane Group Flow (vph)	16	13	1	407	407	55	77	1163	0	140	1207	0
Turn Type	Split		Prot	Split		Prot	Prot			Prot		
Protected Phases	4	4	4	8	8	8	5	2		6		
Permitted Phases											6	
Actuated Green, G (s)	3.6	3.6	3.6	23.8	23.8	23.8	4.4	32.2		23.8	23.8	
Effective Green, g (s)	3.6	3.6	3.6	23.8	23.8	23.8	4.4	32.2		23.8	23.8	
Actuated g/C Ratio	0.05	0.05	0.05	0.33	0.33	0.33	0.06	0.45		0.33	0.33	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	85	81	76	559	535	500	109	2241		588	1686	
v/s Ratio Prot	c0.01	0.01	0.00	0.24	c0.25	0.04	c0.04	0.23		0.08		
v/s Ratio Perm											c0.24	
v/c Ratio	0.19	0.16	0.01	0.73	0.76	0.11	0.71	0.52		0.24	0.72	
Uniform Delay, d1	32.6	32.6	32.3	21.1	21.4	16.6	33.0	14.1		17.3	20.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.1	0.9	0.1	4.7	6.3	0.1	18.8	0.2		0.2	1.5	
Delay (s)	33.7	33.5	32.4	25.8	27.7	16.7	51.8	14.3		17.5	22.4	
Level of Service	C	C	C	C	C	B	D	B		B	C	
Approach Delay (s)		33.2			25.0			16.6			21.9	
Approach LOS		C			C			B			C	

Intersection Summary				
HCM Average Control Delay	21.1	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.70			
Actuated Cycle Length (s)	71.6	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	66.2%	ICU Level of Service	C	
Analysis Period (min)	15			

! Phase conflict between lane groups.
c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	308	1008	200	147	831	0	0	564	639
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0	4.0	4.0	4.0	4.0			4.0	4.0
Lane Util. Factor				0.97	0.91	1.00	0.97	0.95			0.86	0.86
Frpb, ped/bikes				1.00	1.00	1.00	1.00	1.00			0.92	1.00
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00			1.00	1.00
Frt				1.00	1.00	0.85	1.00	1.00			0.95	0.85
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				3433	5085	1583	3433	3539			4193	1362
Flt Permitted				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)				3433	5085	1583	3433	3539			4193	1362
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	342	1120	222	163	923	0	0	627	710
RTOR Reduction (vph)	0	0	0	0	0	87	0	0	0	0	22	22
Lane Group Flow (vph)	0	0	0	342	1120	135	163	923	0	0	960	333
Confl. Peds. (#/hr)												200
Turn Type				Prot		Perm	Prot					Prot
Protected Phases				3	8		5	2			6	6
Permitted Phases						8						
Actuated Green, G (s)				17.4	17.4	17.4	4.4	29.6			21.2	21.2
Effective Green, g (s)				17.4	17.4	17.4	4.4	29.6			21.2	21.2
Actuated g/C Ratio				0.32	0.32	0.32	0.08	0.54			0.39	0.39
Clearance Time (s)				4.0	4.0	4.0	4.0	4.0			4.0	4.0
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)				1086	1609	501	275	1905			1616	525
v/s Ratio Prot				0.10	c0.22		0.05	c0.26			0.23	c0.24
v/s Ratio Perm						0.09						
v/c Ratio				0.31	0.70	0.27	0.59	0.48			0.59	0.63
Uniform Delay, d1				14.3	16.5	14.1	24.4	7.9			13.5	13.7
Progression Factor				1.00	1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2				0.2	1.3	0.3	3.4	0.2			0.6	2.5
Delay (s)				14.4	17.8	14.3	27.8	8.1			14.1	16.2
Level of Service				B	B	B	C	A			B	B
Approach Delay (s)		0.0			16.7			11.1			14.6	
Approach LOS		A			B			B			B	

Intersection Summary				
HCM Average Control Delay	14.5	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.66			
Actuated Cycle Length (s)	55.0	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	96.1%	ICU Level of Service	F	
Analysis Period (min)	15			

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	589	896	265	0	0	0	0	367	192	121	686	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Lane Util. Factor	0.91	0.86	0.91					0.86		1.00	0.91	
Frt	1.00	1.00	0.85					0.95		1.00	1.00	
Flt Protected	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	1610	3176	1441					6078		1770	5085	
Flt Permitted	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	1610	3176	1441					6078		1770	5085	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	654	996	294	0	0	0	0	408	213	134	762	0
RTOR Reduction (vph)	0	3	68	0	0	0	0	53	0	0	0	0
Lane Group Flow (vph)	543	1133	197	0	0	0	0	568	0	134	762	0
Turn Type	Split		Prot							Prot		
Protected Phases	4	4	4					2		1	6	
Permitted Phases												
Actuated Green, G (s)	24.2	24.2	24.2					11.9		4.6	20.5	
Effective Green, g (s)	24.2	24.2	24.2					11.9		4.6	20.5	
Actuated g/C Ratio	0.46	0.46	0.46					0.23		0.09	0.39	
Clearance Time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	739	1458	662					1372		154	1978	
v/s Ratio Prot	0.34	c0.36	0.14					0.09		c0.08	c0.15	
v/s Ratio Perm												
v/c Ratio	0.73	0.78	0.30					0.41		0.87	0.39	
Uniform Delay, d1	11.6	12.0	8.9					17.4		23.8	11.6	
Progression Factor	1.00	1.00	1.00					1.00		1.00	1.00	
Incremental Delay, d2	3.8	2.7	0.3					0.2		37.7	0.1	
Delay (s)	15.4	14.7	9.2					17.6		61.5	11.7	
Level of Service	B	B	A					B		E	B	
Approach Delay (s)		14.1			0.0			17.6			19.1	
Approach LOS		B			A			B			B	

Intersection Summary				
HCM Average Control Delay	16.1	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.63			
Actuated Cycle Length (s)	52.7	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	96.1%	ICU Level of Service	F	
Analysis Period (min)	15			
c Critical Lane Group				

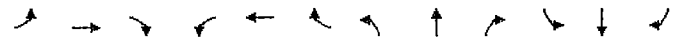
Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Volume (vph)	16	212	0	429	24	94	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		0.95		1.00	1.00
Frt	1.00	1.00		0.99		1.00	0.85
Flt Protected	0.95	1.00		1.00		0.95	1.00
Satd. Flow (prot)	1770	3539		3511		1770	1583
Flt Permitted	0.95	1.00		1.00		0.95	1.00
Satd. Flow (perm)	1770	3539		3511		1770	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	18	236	0	477	27	104	124
RTOR Reduction (vph)	0	0	0	8	0	0	105
Lane Group Flow (vph)	18	236	0	496	0	104	19
Turn Type	Prot		Prot				Prot
Protected Phases	7	4	3	8		6	6
Permitted Phases							
Actuated Green, G (s)	0.5	12.7		8.2		3.8	3.8
Effective Green, g (s)	0.5	12.7		8.2		3.8	3.8
Actuated g/C Ratio	0.02	0.52		0.33		0.16	0.16
Clearance Time (s)	4.0	4.0		4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0		3.0	3.0
Lane Grp Cap (vph)	36	1835		1175		275	246
v/s Ratio Prot	0.01	c0.07		c0.14		c0.06	0.01
v/s Ratio Perm							
v/c Ratio	0.50	0.13		0.42		0.38	0.08
Uniform Delay, d1	11.9	3.0		6.3		9.3	8.9
Progression Factor	1.00	1.00		1.00		1.00	1.00
Incremental Delay, d2	10.5	0.0		0.2		0.9	0.1
Delay (s)	22.4	3.1		6.6		10.2	9.0
Level of Service	C	A		A		B	A
Approach Delay (s)		4.4		6.6		9.5	
Approach LOS		A		A		A	

Intersection Summary				
HCM Average Control Delay	6.7	HCM Level of Service	A	
HCM Volume to Capacity ratio	0.41			
Actuated Cycle Length (s)	24.5	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	26.2%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	EBL	EBR	EBR2	WBL	WBT	WBR	NBL	NBT	NBR2	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	76	214	142	157	362	97	316	330	209	1070	193	203
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.88	1.00	1.00	1.00		1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.85	0.85	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	2787	1583	1770	1804		1770	3539	1583	3433	3539	1583
Flt Permitted	0.31	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	579	2787	1583	1770	1804		1770	3539	1583	3433	3539	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	84	238	158	174	402	108	351	367	232	1189	214	226
RTOR Reduction (vph)	0	0	130	0	11	0	0	0	193	0	0	164
Lane Group Flow (vph)	84	238	28	174	499	0	351	367	39	1189	214	62
Turn Type	custom	custom	custom	Prot			Prot		Prot	Prot		Prot
Protected Phases				3	8		5	2	2	1	6	6
Permitted Phases	4	4	4									
Actuated Green, G (s)	15.5	15.5	15.5	9.4	28.9		21.9	14.5	14.5	31.1	23.7	23.7
Effective Green, g (s)	15.5	15.5	15.5	9.4	28.9		21.9	14.5	14.5	31.1	23.7	23.7
Actuated g/C Ratio	0.18	0.18	0.18	0.11	0.33		0.25	0.17	0.17	0.36	0.27	0.27
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	104	499	284	192	603		448	593	265	1234	970	434
v/s Ratio Prot				0.10	c0.28		0.20	c0.10	0.02	c0.35	0.06	0.04
v/s Ratio Perm	0.15	0.09	0.02									
v/c Ratio	0.81	0.48	0.10	0.91	0.83		0.78	0.62	0.15	0.96	0.22	0.14
Uniform Delay, d1	34.1	31.9	29.7	38.1	26.5		30.1	33.4	30.7	27.1	24.3	23.7
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	35.2	0.7	0.2	39.4	9.2		8.7	1.9	0.3	17.5	0.1	0.2
Delay (s)	69.2	32.6	29.8	77.5	35.7		38.8	35.4	31.0	44.6	24.4	23.9
Level of Service	E	C	C	E	D		D	D	C	D	C	C
Approach Delay (s)					46.3			35.6			39.1	
Approach LOS					D			D			D	

Intersection Summary				
HCM Average Control Delay	39.4	HCM Level of Service	D	
HCM Volume to Capacity ratio	0.84			
Actuated Cycle Length (s)	86.5	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	82.1%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	437	0	180	0	0	0	0	415	74	183	279	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95	1.00					0.95		0.97	0.95	
Frt	1.00	1.00	0.85					0.98		1.00	1.00	
Flt Protected	0.95	0.95	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	1681	1681	1583					3459		3433	3539	
Flt Permitted	0.95	0.95	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	1681	1681	1583					3459		3433	3539	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	486	0	200	0	0	0	0	461	82	203	310	0
RTOR Reduction (vph)	0	0	139	0	0	0	0	30	0	0	0	0
Lane Group Flow (vph)	243	243	61	0	0	0	0	513	0	203	310	0
Turn Type	Split		Prot							Prot		
Protected Phases	4	4	4					2		1	6	
Permitted Phases												
Actuated Green, G (s)	12.2	12.2	12.2					12.0		3.6	19.6	
Effective Green, g (s)	12.2	12.2	12.2					12.0		3.6	19.6	
Actuated g/C Ratio	0.31	0.31	0.31					0.30		0.09	0.49	
Clearance Time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	515	515	485					1043		311	1743	
v/s Ratio Prot	c0.14	0.14	0.04					c0.15		c0.06	0.09	
v/s Ratio Perm												
v/c Ratio	0.47	0.47	0.13					0.49		0.65	0.18	
Uniform Delay, d1	11.2	11.2	10.0					11.4		17.5	5.6	
Progression Factor	1.00	1.00	1.00					1.00		1.00	1.00	
Incremental Delay, d2	0.7	0.7	0.1					0.4		4.9	0.0	
Delay (s)	11.9	11.9	10.1					11.8		22.3	5.7	
Level of Service	B	B	B					B		C	A	
Approach Delay (s)		11.3			0.0			11.8			12.3	
Approach LOS		B			A			B			B	

Intersection Summary				
HCM Average Control Delay	11.7	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.50			
Actuated Cycle Length (s)	39.8	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	41.2%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	86	506	38	141	465	335	59	64	236	623	139	178
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		0.97	1.00	
Frt	1.00	0.99		1.00	0.94		1.00	0.88		1.00	0.92	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3502		1770	3317		1770	1643		3433	1706	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3502		1770	3317		1770	1643		3433	1706	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	96	562	42	157	517	372	66	71	262	692	154	198
RTOR Reduction (vph)	0	6	0	0	133	0	0	150	0	0	49	0
Lane Group Flow (vph)	96	598	0	157	756	0	66	183	0	692	303	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												
Actuated Green, G (s)	8.1	19.6		12.1	23.6		6.8	13.6		19.1	25.9	
Effective Green, g (s)	8.1	19.6		12.1	23.6		6.8	13.6		19.1	25.9	
Actuated g/C Ratio	0.10	0.24		0.15	0.29		0.08	0.17		0.24	0.32	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	178	854		266	974		150	278		816	550	
v/s Ratio Prot	0.05	0.17		c0.09	c0.23		0.04	c0.11		c0.20	0.18	
v/s Ratio Perm												
v/c Ratio	0.54	0.70		0.59	0.78		0.44	0.66		0.85	0.55	
Uniform Delay, d1	34.4	27.7		31.8	26.0		35.0	31.2		29.3	22.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	3.1	2.6		3.5	3.9		2.1	5.5		8.2	1.2	
Delay (s)	37.5	30.3		35.3	29.9		37.0	36.7		37.4	23.7	
Level of Service	D	C		D	C		D	D		D	C	
Approach Delay (s)		31.3			30.7			36.8			32.8	
Approach LOS		C			C			D			C	

Intersection Summary				
HCM Average Control Delay	32.3	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.76			
Actuated Cycle Length (s)	80.4	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	77.4%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	WBL	WBR	SEL	SET	NWT	NWR	NWR2	SWL	SWR
Lane Configurations									
Volume (vph)	0	0	754	580	742	0	306	133	230
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor			0.97	0.95	0.95		1.00	0.97	1.00
Frt			1.00	1.00	1.00		0.85	1.00	0.85
Flt Protected			0.95	1.00	1.00		1.00	0.95	1.00
Satd. Flow (prot)			3433	3539	3539		1583	3433	1583
Flt Permitted			0.95	1.00	1.00		1.00	0.95	1.00
Satd. Flow (perm)			3433	3539	3539		1583	3433	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	838	644	824	0	340	148	256
RTOR Reduction (vph)	0	0	0	0	0	0	230	0	218
Lane Group Flow (vph)	0	0	838	644	824	0	110	148	38
Turn Type			Prot				Perm		Perm
Protected Phases			5	2	6			4	
Permitted Phases							6		4
Actuated Green, G (s)			17.2	39.0	17.8		17.8	8.2	8.2
Effective Green, g (s)			17.2	39.0	17.8		17.8	8.2	8.2
Actuated g/C Ratio			0.31	0.71	0.32		0.32	0.15	0.15
Clearance Time (s)			4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)			3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)			1070	2500	1141		510	510	235
v/s Ratio Prot			c0.24	0.18	c0.23			c0.04	
v/s Ratio Perm							0.07		0.02
v/c Ratio			0.78	0.26	0.72		0.21	0.29	0.16
Uniform Delay, d1			17.3	2.9	16.5		13.6	20.9	20.5
Progression Factor			1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2			3.8	0.1	2.3		0.2	0.3	0.3
Delay (s)			21.1	3.0	18.8		13.8	21.2	20.8
Level of Service			C	A	B		B	C	C
Approach Delay (s)	0.0			13.2	17.3			21.0	
Approach LOS	A			B	B			C	

Intersection Summary				
HCM Average Control Delay	15.8	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.66			
Actuated Cycle Length (s)	55.2	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	55.8%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL2	EBL	EBR	SEL	SET	SER	NWL	NWT	NWR	SWL	SWR
Lane Configurations											
Volume (vph)	300	0	161	347	370	0	0	723	214	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		
Lane Util. Factor	0.95	0.95	1.00	0.97	0.95			0.95	1.00		
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		
Flt Protected	0.95	0.95	1.00	0.95	1.00			1.00	1.00		
Satd. Flow (prot)	1681	1681	1583	3433	3539			3539	1583		
Flt Permitted	0.95	0.95	1.00	0.95	1.00			1.00	1.00		
Satd. Flow (perm)	1681	1681	1583	3433	3539			3539	1583		
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	333	0	179	386	411	0	0	803	238	0	0
RTOR Reduction (vph)	0	0	141	0	0	0	0	0	156	0	0
Lane Group Flow (vph)	166	167	38	386	411	0	0	803	82	0	0
Turn Type	Split		Prot	Prot					Prot		
Protected Phases	4	4	4	1	6			2	2		
Permitted Phases											
Actuated Green, G (s)	10.1	10.1	10.1	8.9	29.3			16.4	16.4		
Effective Green, g (s)	10.1	10.1	10.1	8.9	29.3			16.4	16.4		
Actuated g/C Ratio	0.21	0.21	0.21	0.19	0.62			0.35	0.35		
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0		
Lane Grp Cap (vph)	358	358	337	645	2188			1224	548		
v/s Ratio Prot	0.10	c0.10	0.02	c0.11	0.12			c0.23	0.05		
v/s Ratio Perm											
v/c Ratio	0.46	0.47	0.11	0.60	0.19			0.66	0.15		
Uniform Delay, d1	16.3	16.3	15.0	17.6	3.9			13.1	10.7		
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00	1.00		
Incremental Delay, d2	1.0	1.0	0.1	1.5	0.0			1.3	0.1		
Delay (s)	17.2	17.3	15.2	19.1	4.0			14.4	10.8		
Level of Service	B	B	B	B	A			B	B		
Approach Delay (s)		16.5			11.3			13.6		0.0	
Approach LOS		B			B			B		A	

Intersection Summary			
HCM Average Control Delay	13.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	47.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	48.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	10	10	10	200	2	25	3	269	100	15	939	3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	11	11	11	222	2	28	3	299	111	17	1043	3

Direction, Lane #	EB 1	WB 1	NE 1	NE 2	SW 1	SW 2
Volume Total (vph)	33	252	153	261	538	525
Volume Left (vph)	11	222	3	0	17	0
Volume Right (vph)	11	28	0	111	0	3
Hadj (s)	-0.10	0.14	0.04	-0.26	0.05	0.03
Departure Headway (s)	7.4	6.8	7.1	6.8	6.3	6.3
Degree Utilization, x	0.07	0.48	0.30	0.49	0.94	0.91
Capacity (veh/h)	446	513	497	520	538	525
Control Delay (s)	11.0	15.8	11.9	14.9	47.8	42.9
Approach Delay (s)	11.0	15.8	13.8		45.4	
Approach LOS	B	C	B		E	

Intersection Summary					
Delay	33.1				
HCM Level of Service	D				
Intersection Capacity Utilization	62.7%	ICU Level of Service		B	
Analysis Period (min)	15				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	6	397	510	175	363	3	547	2	409	0	2	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.95	1.00		1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1861			1774	1583		1779	
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.95	1.00		1.00	
Satd. Flow (perm)	1770	1863	1583	1770	1861			1774	1583		1779	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	7	441	567	194	403	3	608	2	454	0	2	1
RTOR Reduction (vph)	0	0	268	0	0	0	0	0	276	0	1	0
Lane Group Flow (vph)	7	441	299	194	406	0	0	610	178	0	2	0
Turn Type	Prot		Prot	Prot			Split		Prot	Split		
Protected Phases	7	4	4	3	8		2	2	2	6	6	
Permitted Phases												
Actuated Green, G (s)	0.8	29.4	29.4	12.2	40.8			37.8	37.8		1.1	
Effective Green, g (s)	0.8	29.4	29.4	12.2	40.8			37.8	37.8		1.1	
Actuated g/C Ratio	0.01	0.30	0.30	0.13	0.42			0.39	0.39		0.01	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	15	568	482	224	787			695	620		20	
v/s Ratio Prot	0.00	c0.24	0.19	c0.11	0.22			c0.34	0.11		c0.00	
v/s Ratio Perm												
v/c Ratio	0.47	0.78	0.62	0.87	0.52			0.88	0.29		0.10	
Uniform Delay, d1	47.6	30.6	28.8	41.3	20.6			27.2	20.1		47.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	21.2	6.6	2.4	27.6	0.6			12.1	0.3		2.2	
Delay (s)	68.9	37.1	31.1	69.0	21.1			39.3	20.4		49.4	
Level of Service	E	D	C	E	C			D	C		D	
Approach Delay (s)		34.0			36.6			31.2			49.4	
Approach LOS		C			D			C			D	

Intersection Summary				
HCM Average Control Delay	33.5	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.83			
Actuated Cycle Length (s)	96.5	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	77.7%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Volume (vph)	214	256	0	573	371	332	310
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00		1.00	1.00	1.00	0.95
Frt	1.00	0.85		1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00		1.00	1.00	0.95	1.00
Satd. Flow (prot)	3433	1583		1863	1583	1770	3539
Flt Permitted	0.95	1.00		1.00	1.00	0.95	1.00
Satd. Flow (perm)	3433	1583		1863	1583	1770	3539
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	238	284	0	637	412	369	344
RTOR Reduction (vph)	0	235	0	0	246	0	0
Lane Group Flow (vph)	238	49	0	637	166	369	344
Turn Type		Perm	Prot		Perm	Prot	
Protected Phases	1		3	8		7	
Permitted Phases		1			8		6
Actuated Green, G (s)	12.4	12.4		28.8	28.8	18.3	12.4
Effective Green, g (s)	12.4	12.4		28.8	28.8	18.3	12.4
Actuated g/C Ratio	0.17	0.17		0.40	0.40	0.26	0.17
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	595	275		750	638	453	614
v/s Ratio Prot	0.07			c0.34		c0.21	
v/s Ratio Perm		0.03			0.10		c0.10
v/c Ratio	0.40	0.18		0.85	0.26	0.81	0.56
Uniform Delay, d1	26.2	25.2		19.4	14.2	25.0	27.1
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.3		8.9	0.2	10.8	1.2
Delay (s)	26.7	25.5		28.3	14.5	35.8	28.2
Level of Service	C	C		C	B	D	C
Approach Delay (s)	26.1			22.9			32.1
Approach LOS	C			C			C

Intersection Summary				
HCM Average Control Delay	26.5	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.78			
Actuated Cycle Length (s)	71.5	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	64.7%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	WBL	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations							
Volume (vph)	63	6	0	905	108	8	520
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0		4.0	4.0
Lane Util. Factor	0.97			0.95		1.00	0.95
Frt	0.99			0.98		1.00	1.00
Flt Protected	0.96			1.00		0.95	1.00
Satd. Flow (prot)	3409			3483		1770	3539
Flt Permitted	0.96			1.00		0.95	1.00
Satd. Flow (perm)	3409			3483		1770	3539
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	70	7	0	1006	120	9	578
RTOR Reduction (vph)	7	0	0	13	0	0	0
Lane Group Flow (vph)	70	0	0	1113	0	9	578
Turn Type			Prot			Prot	
Protected Phases	8		5	2		1	6
Permitted Phases							
Actuated Green, G (s)	2.0			17.0		0.6	21.6
Effective Green, g (s)	2.0			17.0		0.6	21.6
Actuated g/C Ratio	0.06			0.54		0.02	0.68
Clearance Time (s)	4.0			4.0		4.0	4.0
Vehicle Extension (s)	3.0			3.0		3.0	3.0
Lane Grp Cap (vph)	216			1874		34	2419
v/s Ratio Prot	c0.02			c0.32		0.01	c0.16
v/s Ratio Perm							
v/c Ratio	0.33			0.59		0.26	0.24
Uniform Delay, d1	14.2			5.0		15.3	1.9
Progression Factor	1.00			1.00		1.00	1.00
Incremental Delay, d2	0.9			0.5		4.1	0.1
Delay (s)	15.0			5.5		19.4	1.9
Level of Service	B			A		B	A
Approach Delay (s)	15.0			5.5			2.2
Approach LOS	B			A			A

Intersection Summary				
HCM Average Control Delay	4.8	HCM Level of Service	A	
HCM Volume to Capacity ratio	0.57			
Actuated Cycle Length (s)	31.6	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	38.5%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	22	21	14	27	20	150	25	823	65	86	466	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.94		1.00	0.87		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1748		1770	1616		1770	3500		1770	3510	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1748		1770	1616		1770	3500		1770	3510	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	24	23	16	30	22	167	28	914	72	96	518	30
RTOR Reduction (vph)	0	14	0	0	148	0	0	8	0	0	5	0
Lane Group Flow (vph)	24	25	0	30	41	0	28	978	0	96	543	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	0.6	5.1		0.6	5.1		0.6	20.8		3.2	23.4	
Effective Green, g (s)	0.6	5.1		0.6	5.1		0.6	20.8		3.2	23.4	
Actuated g/C Ratio	0.01	0.11		0.01	0.11		0.01	0.46		0.07	0.51	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	23	195		23	180		23	1593		124	1797	
v/s Ratio Prot	0.01	0.01		c0.02	c0.03		0.02	c0.28		c0.05	c0.15	
v/s Ratio Perm												
v/c Ratio	1.04	0.13		1.30	0.23		1.22	0.61		0.77	0.30	
Uniform Delay, d1	22.6	18.3		22.6	18.5		22.6	9.4		20.9	6.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	201.7	0.3		293.5	0.6		261.7	0.7		25.4	0.1	
Delay (s)	224.3	18.6		316.0	19.1		284.2	10.1		46.3	6.5	
Level of Service	F	B		F	B		F	B		D	A	
Approach Delay (s)		96.9			59.8			17.7			12.5	
Approach LOS		F			E			B			B	

Intersection Summary				
HCM Average Control Delay	23.3	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.64			
Actuated Cycle Length (s)	45.7	Sum of lost time (s)	20.0	
Intersection Capacity Utilization	56.6%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	7	41	32	53	29	19	47	973	131	22	500	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.94		1.00	0.98		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1752		1770	3476		1770	3529	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1583	1770	1752		1770	3476		1770	3529	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	8	46	36	59	32	21	52	1081	146	24	556	11
RTOR Reduction (vph)	0	0	32	0	18	0	0	12	0	0	2	0
Lane Group Flow (vph)	8	46	4	59	35	0	52	1215	0	24	565	0
Turn Type	Prot		Prot	Prot			Prot			Prot		
Protected Phases	7	4	4	3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	0.6	4.7	4.7	2.2	6.3		1.8	24.3		0.6	23.1	
Effective Green, g (s)	0.6	4.7	4.7	2.2	6.3		1.8	24.3		0.6	23.1	
Actuated g/C Ratio	0.01	0.10	0.10	0.05	0.13		0.04	0.51		0.01	0.48	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	22	183	156	81	231		67	1767		22	1705	
v/s Ratio Prot	0.00	c0.02	0.00	c0.03	0.02		c0.03	c0.35		0.01	0.16	
v/s Ratio Perm												
v/c Ratio	0.36	0.25	0.02	0.73	0.15		0.78	0.69		1.09	0.33	
Uniform Delay, d1	23.4	19.9	19.5	22.5	18.4		22.8	8.9		23.6	7.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	9.9	0.7	0.1	27.6	0.3		42.0	1.1		221.9	0.1	
Delay (s)	33.4	20.6	19.5	50.1	18.7		64.8	10.0		245.5	7.7	
Level of Service	C	C	B	D	B		E	B		F	A	
Approach Delay (s)		21.3			35.2			12.2			17.4	
Approach LOS		C			D			B			B	

Intersection Summary				
HCM Average Control Delay	15.3	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.58			
Actuated Cycle Length (s)	47.8	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	54.0%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	124	855	16	162	926	230	40	31	78	410	35	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.95			1.00	1.00	0.95	0.95	
Frt	1.00	1.00		1.00	0.97			1.00	0.85	1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00	0.95	0.98	
Satd. Flow (prot)	1770	5071		1770	3433			1812	1583	1681	1613	
Flt Permitted	0.95	1.00		0.95	1.00			0.97	1.00	0.95	0.98	
Satd. Flow (perm)	1770	5071		1770	3433			1812	1583	1681	1613	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	138	950	18	180	1029	256	44	34	87	456	39	144
RTOR Reduction (vph)	0	2	0	0	23	0	0	0	79	0	33	0
Lane Group Flow (vph)	138	966	0	180	1262	0	0	78	8	328	278	0
Turn Type	Prot			Prot			Split		Perm	Split		
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases									2			
Actuated Green, G (s)	7.8	27.7		11.7	31.6			7.5	7.5	18.1	18.1	
Effective Green, g (s)	7.8	27.7		11.7	31.6			7.5	7.5	18.1	18.1	
Actuated g/C Ratio	0.10	0.34		0.14	0.39			0.09	0.09	0.22	0.22	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	170	1734		256	1339			168	147	376	360	
v/s Ratio Prot	0.08	0.19		c0.10	c0.37			c0.04		c0.20	0.17	
v/s Ratio Perm									0.01			
v/c Ratio	0.81	0.56		0.70	0.94			0.46	0.05	0.87	0.77	
Uniform Delay, d1	35.9	21.7		33.0	23.8			34.8	33.5	30.3	29.5	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2	24.6	0.4		8.5	13.2			2.0	0.2	19.4	9.8	
Delay (s)	60.5	22.1		41.5	37.1			36.9	33.7	49.7	39.3	
Level of Service	E	C		D	D			D	C	D	D	
Approach Delay (s)		26.9			37.6			35.2			44.7	
Approach LOS		C			D			D			D	

Intersection Summary				
HCM Average Control Delay	35.3	HCM Level of Service	D	
HCM Volume to Capacity ratio	0.86			
Actuated Cycle Length (s)	81.0	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	73.2%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑			↑↑		↱
Volume (veh/h)	1297	62	0	1605	0	114
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	1441	69	0	1783	0	127
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	575			607		
pX, platoon unblocked			0.87		0.72	0.87
vC, conflicting volume			1510		2367	515
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1045		1007	0
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	87
cM capacity (veh/h)			572		171	938

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1
Volume Total	576	576	357	892	892	127
Volume Left	0	0	0	0	0	0
Volume Right	0	0	69	0	0	127
cSH	1700	1700	1700	1700	1700	938
Volume to Capacity	0.34	0.34	0.21	0.52	0.52	0.13
Queue Length 95th (ft)	0	0	0	0	0	12
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	9.4
Lane LOS						A
Approach Delay (s)	0.0			0.0		9.4
Approach LOS						A

Intersection Summary				
Average Delay	0.3			
Intersection Capacity Utilization	47.7%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↰↑↑	↱
Volume (vph)	0	1026	1341	0	963	290
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		0.97	0.91
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3539	3539		3431	1441
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3539	3539		3431	1441
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	1140	1490	0	1070	322
RTOR Reduction (vph)	0	0	0	0	2	12
Lane Group Flow (vph)	0	1140	1490	0	1100	278
Turn Type						Prot
Protected Phases		4	8		6	6
Permitted Phases						
Actuated Green, G (s)		59.7	59.7		52.3	52.3
Effective Green, g (s)		59.7	59.7		52.3	52.3
Actuated g/C Ratio		0.50	0.50		0.44	0.44
Clearance Time (s)		4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1761	1761		1495	628
v/s Ratio Prot		0.32	c0.42		c0.32	0.19
v/s Ratio Perm						
v/c Ratio		0.65	0.85		0.74	0.44
Uniform Delay, d1		22.3	26.2		28.1	23.7
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		0.8	4.0		3.3	2.3
Delay (s)		23.2	30.1		31.4	25.9
Level of Service		C	C		C	C
Approach Delay (s)		23.2	30.1		30.2	
Approach LOS		C	C		C	

Intersection Summary			
HCM Average Control Delay	28.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	72.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	235	1728	0	0	1538	952	615	10	976	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	0.97	0.95			0.91	1.00	0.95	0.91	0.95			
Frt	1.00	1.00			1.00	0.85	1.00	0.87	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99	1.00			
Satd. Flow (prot)	3433	3539			5085	1583	1681	1467	1504			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99	1.00			
Satd. Flow (perm)	3433	3539			5085	1583	1681	1467	1504			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	261	1920	0	0	1709	1058	683	11	1084	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	456	0	6	6	0	0	0
Lane Group Flow (vph)	261	1920	0	0	1709	602	615	582	569	0	0	0
Turn Type	Prot					Prot	Split		Prot			
Protected Phases	7	4			8	8	2	2	2			
Permitted Phases												
Actuated Green, G (s)	10.0	67.0			53.0	53.0	45.0	45.0	45.0			
Effective Green, g (s)	10.0	67.0			53.0	53.0	45.0	45.0	45.0			
Actuated g/C Ratio	0.08	0.56			0.44	0.44	0.38	0.38	0.38			
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0			
Lane Grp Cap (vph)	286	1976			2246	699	630	550	564			
v/s Ratio Prot	0.08	c0.54			0.34	0.38	0.37	c0.40	0.38			
v/s Ratio Perm												
v/c Ratio	0.91	0.97			0.76	0.86	0.98	1.06	1.01			
Uniform Delay, d1	54.6	25.6			28.2	30.2	37.0	37.5	37.5			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	31.3	14.1			1.6	10.6	30.5	54.5	40.0			
Delay (s)	85.9	39.7			29.7	40.8	67.4	92.0	77.5			
Level of Service	F	D			C	D	E	F	E			
Approach Delay (s)		45.2			34.0			78.8			0.0	
Approach LOS		D			C			E			A	

Intersection Summary				
HCM Average Control Delay	49.5	HCM Level of Service	D	
HCM Volume to Capacity ratio	1.01			
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	102.9%	ICU Level of Service	G	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	242	2476	251	67	1815	80	618	65	172	65	29	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		0.97	0.95		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.89		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5053		3433	3154		1770	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5053		3433	3154		1770	1863	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	269	2751	279	74	2017	89	687	72	191	72	32	89
RTOR Reduction (vph)	0	0	61	0	3	0	0	104	0	0	0	84
Lane Group Flow (vph)	269	2751	218	74	2103	0	687	159	0	72	32	5
Turn Type	Prot		Prot	Prot			Prot			Prot		Prot
Protected Phases	7	4	4	3	8		5	2		1	6	6
Permitted Phases												
Actuated Green, G (s)	23.4	79.0	79.0	7.0	62.6		30.0	27.5		10.5	8.0	8.0
Effective Green, g (s)	23.4	79.0	79.0	7.0	62.6		30.0	27.5		10.5	8.0	8.0
Actuated g/C Ratio	0.17	0.56	0.56	0.05	0.45		0.21	0.20		0.08	0.06	0.06
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	296	2869	893	89	2259		736	620		133	106	90
v/s Ratio Prot	c0.15	c0.54	0.14	0.04	0.42		c0.20	c0.05		0.04	0.02	0.00
v/s Ratio Perm												
v/c Ratio	0.91	0.96	0.24	0.83	0.93		0.93	0.26		0.54	0.30	0.06
Uniform Delay, d1	57.3	29.0	15.4	65.9	36.7		54.0	47.6		62.4	63.3	62.4
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	29.6	9.0	0.1	45.4	7.7		18.7	0.2		4.4	1.6	0.3
Delay (s)	86.8	38.0	15.6	111.3	44.3		72.8	47.8		66.9	64.9	62.7
Level of Service	F	D	B	F	D		E	D		E	E	E
Approach Delay (s)		40.1			46.6			65.9			64.6	
Approach LOS		D			D			E			E	

Intersection Summary				
HCM Average Control Delay	46.6	HCM Level of Service	D	
HCM Volume to Capacity ratio	0.87			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	85.8%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↱	↰	↑↑↑	↰↰	↱
Volume (vph)	2486	227	177	1656	312	242
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	5085	1583	1770	5085	3433	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	5085	1583	1770	5085	3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2702	247	192	1800	339	263
RTOR Reduction (vph)	0	86	0	0	0	167
Lane Group Flow (vph)	2702	161	192	1800	339	96
Turn Type		Perm	Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	50.1	50.1	11.0	65.1	13.8	13.8
Effective Green, g (s)	50.1	50.1	11.0	65.1	13.8	13.8
Actuated g/C Ratio	0.58	0.58	0.13	0.75	0.16	0.16
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2932	913	224	3809	545	251
v/s Ratio Prot	c0.53		c0.11	0.35	c0.10	
v/s Ratio Perm		0.10				0.06
v/c Ratio	0.92	0.18	0.86	0.47	0.62	0.38
Uniform Delay, d1	16.6	8.7	37.2	4.2	34.1	32.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	5.4	0.1	26.1	0.1	2.2	1.0
Delay (s)	22.1	8.8	63.3	4.3	36.3	33.7
Level of Service	C	A	E	A	D	C
Approach Delay (s)	21.0			10.0	35.2	
Approach LOS	C			B	D	

Intersection Summary				
HCM Average Control Delay	18.6	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.86			
Actuated Cycle Length (s)	86.9	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	76.7%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↱	↰↰	↑↑↑	↰	↱
Volume (vph)	2539	189	189	1573	260	260
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	0.97	0.91	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	5085	1583	3433	5085	1770	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	5085	1583	3433	5085	1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2760	205	205	1710	283	283
RTOR Reduction (vph)	0	86	0	0	0	94
Lane Group Flow (vph)	2760	119	205	1710	283	189
Turn Type		Perm	Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	42.0	42.0	5.0	51.0	14.8	14.8
Effective Green, g (s)	42.0	42.0	5.0	51.0	14.8	14.8
Actuated g/C Ratio	0.57	0.57	0.07	0.69	0.20	0.20
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2894	901	233	3514	355	317
v/s Ratio Prot	c0.54		c0.06	0.34	c0.16	
v/s Ratio Perm		0.08				0.12
v/c Ratio	0.95	0.13	0.88	0.49	0.80	0.60
Uniform Delay, d1	15.0	7.4	34.1	5.3	28.1	26.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	8.4	0.1	29.1	0.1	11.8	3.0
Delay (s)	23.4	7.5	63.2	5.4	39.8	29.8
Level of Service	C	A	E	A	D	C
Approach Delay (s)	22.3			11.6	34.8	
Approach LOS	C			B	C	

Intersection Summary				
HCM Average Control Delay	19.8	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.91			
Actuated Cycle Length (s)	73.8	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	78.9%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	508	1784	495	178	1031	176	490	429	307	147	171	241
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.91		0.97	0.91		0.97	0.91	1.00	0.97	0.91	
Frt	1.00	0.97		1.00	0.98		1.00	1.00	0.85	1.00	0.91	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	4920		3433	4974		3433	5085	1583	3433	4639	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3433	4920		3433	4974		3433	5085	1583	3433	4639	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	564	1982	550	198	1146	196	544	477	341	163	190	268
RTOR Reduction (vph)	0	40	0	0	19	0	0	0	104	0	221	0
Lane Group Flow (vph)	564	2492	0	198	1323	0	544	477	237	163	237	0
Turn Type	Prot			Prot			Prot		Prot	Prot		
Protected Phases	7	4		3	8		5	2	2	1	6	
Permitted Phases												
Actuated Green, G (s)	22.2	58.1		8.0	43.9		19.8	24.5	24.5	8.1	12.8	
Effective Green, g (s)	22.2	58.1		8.0	43.9		19.8	24.5	24.5	8.1	12.8	
Actuated g/C Ratio	0.19	0.51		0.07	0.38		0.17	0.21	0.21	0.07	0.11	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	664	2492		239	1904		593	1086	338	242	518	
v/s Ratio Prot	c0.16	c0.51		0.06	0.27		c0.16	0.09	c0.15	0.05	0.05	
v/s Ratio Perm												
v/c Ratio	0.85	1.00		0.83	0.69		0.92	0.44	0.70	0.67	0.46	
Uniform Delay, d1	44.6	28.3		52.7	29.8		46.6	39.1	41.7	52.0	47.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	9.9	18.0		20.5	1.1		19.1	0.3	6.5	7.2	0.6	
Delay (s)	54.6	46.3		73.1	30.9		65.7	39.4	48.2	59.2	48.3	
Level of Service	D	D		E	C		E	D	D	E	D	
Approach Delay (s)		47.8			36.3			52.1			51.2	
Approach LOS		D			D			D			D	

Intersection Summary				
HCM Average Control Delay	46.3	HCM Level of Service	D	
HCM Volume to Capacity ratio	0.93			
Actuated Cycle Length (s)	114.7	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	86.6%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	152	1294	618	80	693	72	440	167	145	78	124	148
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	0.97	0.91		0.97	0.91		0.97	0.91		1.00	0.95	
Frt	1.00	0.95		1.00	0.99		1.00	0.93		1.00	0.92	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	4839		3433	5014		3433	4731		1770	3251	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	4839		3433	5014		3433	4731		1770	3251	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	169	1438	687	89	770	80	489	186	161	87	138	164
RTOR Reduction (vph)	0	78	0	0	12	0	0	128	0	0	142	0
Lane Group Flow (vph)	169	2047	0	89	838	0	489	219	0	87	160	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	8.1	44.3		3.9	40.1		15.5	18.3		7.5	10.3	
Effective Green, g (s)	8.1	44.3		3.9	40.1		15.5	18.3		7.5	10.3	
Actuated g/C Ratio	0.09	0.49		0.04	0.45		0.17	0.20		0.08	0.11	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	309	2382		149	2234		591	962		148	372	
v/s Ratio Prot	c0.05	c0.42		0.03	0.17		c0.14	0.05		0.05	c0.05	
v/s Ratio Perm												
v/c Ratio	0.55	0.86		0.60	0.38		0.83	0.23		0.59	0.43	
Uniform Delay, d1	39.2	20.1		42.3	16.6		36.0	29.9		39.8	37.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.0	3.3		6.3	0.1		9.3	0.1		5.9	0.8	
Delay (s)	41.2	23.4		48.6	16.7		45.2	30.1		45.6	37.9	
Level of Service	D	C		D	B		D	C		D	D	
Approach Delay (s)		24.7			19.7			38.9			39.6	
Approach LOS		C			B			D			D	

Intersection Summary				
HCM Average Control Delay	27.7	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.75			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	76.2%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	48	1302	174	8	715	22	86	14	31	27	8	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	1.00		1.00	0.90		1.00	0.88	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	4996		1770	5063		1770	1673		1770	1643	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	4996		1770	5063		1770	1673		1770	1643	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	53	1447	193	9	794	24	96	16	34	30	9	33
RTOR Reduction (vph)	0	22	0	0	4	0	0	29	0	0	31	0
Lane Group Flow (vph)	53	1618	0	9	814	0	96	21	0	30	11	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	1.3	19.6		0.6	18.9		4.0	6.0		0.6	2.6	
Effective Green, g (s)	1.3	19.6		0.6	18.9		4.0	6.0		0.6	2.6	
Actuated g/C Ratio	0.03	0.46		0.01	0.44		0.09	0.14		0.01	0.06	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	54	2288		25	2236		165	235		25	100	
v/s Ratio Prot	c0.03	c0.32		0.01	0.16		c0.05	c0.01		0.02	0.01	
v/s Ratio Perm												
v/c Ratio	0.98	0.71		0.36	0.36		0.58	0.09		1.20	0.11	
Uniform Delay, d1	20.7	9.3		20.9	8.0		18.6	16.0		21.1	19.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	115.3	1.0		8.7	0.1		5.1	0.2		247.2	0.5	
Delay (s)	136.0	10.3		29.6	8.1		23.7	16.2		268.3	19.5	
Level of Service	F	B		C	A		C	B		F	B	
Approach Delay (s)		14.3			8.3			21.2			123.2	
Approach LOS		B			A			C			F	

Intersection Summary				
HCM Average Control Delay	15.7	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.55			
Actuated Cycle Length (s)	42.8	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	53.8%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	306	988	63	21	502	24	39	45	34	23	32	209
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.94		1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5040		1770	5050		1770	1742		1770	1621	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	5040		1770	5050		1770	1742		1770	1621	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	340	1098	70	23	558	27	43	50	38	26	36	232
RTOR Reduction (vph)	0	9	0	0	8	0	0	31	0	0	194	0
Lane Group Flow (vph)	340	1159	0	23	577	0	43	57	0	26	74	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	11.9	26.6		0.7	15.4		1.4	9.4		0.7	8.7	
Effective Green, g (s)	11.9	26.6		0.7	15.4		1.4	9.4		0.7	8.7	
Actuated g/C Ratio	0.22	0.50		0.01	0.29		0.03	0.18		0.01	0.16	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	394	2511		23	1456		46	307		23	264	
v/s Ratio Prot	c0.19	c0.23		0.01	0.11		c0.02	0.03		0.01	c0.05	
v/s Ratio Perm												
v/c Ratio	0.86	0.46		1.00	0.40		0.93	0.18		1.13	0.28	
Uniform Delay, d1	20.0	8.7		26.4	15.3		26.0	18.7		26.4	19.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	17.4	0.1		187.7	0.2		107.1	0.3		231.0	0.6	
Delay (s)	37.4	8.9		214.0	15.4		133.1	19.0		257.4	20.2	
Level of Service	D	A		F	B		F	B		F	C	
Approach Delay (s)		15.3			23.0			56.5			41.2	
Approach LOS		B			C			E			D	

Intersection Summary				
HCM Average Control Delay	22.2	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.54			
Actuated Cycle Length (s)	53.4	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	58.4%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	839	190	89	437	126	248
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.91		1.00	0.91	0.97	1.00
Frt	0.97		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	4944		1770	5085	3433	1583
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	4944		1770	5085	3433	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	932	211	99	486	140	276
RTOR Reduction (vph)	60	0	0	0	0	229
Lane Group Flow (vph)	1083	0	99	486	140	47
Turn Type			Prot			Prot
Protected Phases	4		3	8	2	2
Permitted Phases						
Actuated Green, G (s)	16.6		2.4	23.0	5.8	5.8
Effective Green, g (s)	16.6		2.4	23.0	5.8	5.8
Actuated g/C Ratio	0.45		0.07	0.62	0.16	0.16
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2230		115	3178	541	249
v/s Ratio Prot	c0.22		c0.06	0.10	c0.04	0.03
v/s Ratio Perm						
v/c Ratio	0.49		0.86	0.15	0.26	0.19
Uniform Delay, d1	7.1		17.0	2.9	13.6	13.5
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2		44.1	0.0	0.3	0.4
Delay (s)	7.3		61.1	2.9	13.9	13.8
Level of Service	A		E	A	B	B
Approach Delay (s)	7.3			12.7	13.8	
Approach LOS	A			B	B	

Intersection Summary			
HCM Average Control Delay	10.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	36.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	42.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	260	52	52	188	38	248	189	644	163	338	403	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.95	0.95			1.00	1.00	0.97	0.91		0.97	0.91	1.00
Frt	1.00	0.96			1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	0.98			0.96	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1658			1788	1583	3433	4931		3433	5085	1583
Flt Permitted	0.95	0.98			0.96	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1681	1658			1788	1583	3433	4931		3433	5085	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	289	58	58	209	42	276	210	716	181	376	448	84
RTOR Reduction (vph)	0	17	0	0	0	213	0	51	0	0	0	59
Lane Group Flow (vph)	205	183	0	0	251	63	210	846	0	376	448	25
Turn Type	Split			Split		Perm	Prot			Prot		Perm
Protected Phases	2	2		6	6		3	8		7	4	
Permitted Phases						6						4
Actuated Green, G (s)	13.3	13.3			16.2	16.2	7.1	17.3		11.7	21.9	21.9
Effective Green, g (s)	13.3	13.3			16.2	16.2	7.1	17.3		11.7	21.9	21.9
Actuated g/C Ratio	0.18	0.18			0.22	0.22	0.10	0.23		0.16	0.29	0.29
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	300	296			389	344	327	1145		539	1495	465
v/s Ratio Prot	c0.12	0.11			c0.14		0.06	c0.17		c0.11	0.09	
v/s Ratio Perm						0.04						0.02
v/c Ratio	0.68	0.62			0.65	0.18	0.64	0.74		0.70	0.30	0.05
Uniform Delay, d1	28.6	28.3			26.5	23.8	32.5	26.5		29.7	20.4	18.9
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	6.3	3.8			3.7	0.3	4.3	2.5		3.9	0.1	0.0
Delay (s)	34.9	32.1			30.2	24.0	36.7	29.0		33.6	20.5	18.9
Level of Service	C	C			C	C	D	C		C	C	B
Approach Delay (s)		33.5			27.0			30.5			25.8	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	28.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	74.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	54.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	135	105	173	14	54	115	113	553	10	182	632	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.90		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1673		1770	3530		1770	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	1863	1583	1770	1673		1770	3530		1770	3539	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	150	117	192	16	60	128	126	614	11	202	702	114
RTOR Reduction (vph)	0	0	133	0	105	0	0	2	0	0	0	80
Lane Group Flow (vph)	150	117	59	16	83	0	126	623	0	202	702	34
Turn Type	Prot		Prot	Prot			Prot			Prot		Prot
Protected Phases	7	4	4	3	8		5	2		1	6	6
Permitted Phases												
Actuated Green, G (s)	8.4	18.5	18.5	0.7	10.8		6.6	14.9		9.6	17.9	17.9
Effective Green, g (s)	8.4	18.5	18.5	0.7	10.8		6.6	14.9		9.6	17.9	17.9
Actuated g/C Ratio	0.14	0.31	0.31	0.01	0.18		0.11	0.25		0.16	0.30	0.30
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	249	577	491	21	303		196	881		285	1061	475
v/s Ratio Prot	c0.08	0.06	0.04	0.01	c0.05		0.07	0.18		c0.11	c0.20	0.02
v/s Ratio Perm												
v/c Ratio	0.60	0.20	0.12	0.76	0.27		0.64	0.71		0.71	0.66	0.07
Uniform Delay, d1	24.1	15.2	14.8	29.4	21.1		25.4	20.4		23.7	18.3	15.0
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	4.1	0.2	0.1	92.1	0.5		7.0	2.6		7.8	1.6	0.1
Delay (s)	28.2	15.3	14.9	121.5	21.6		32.5	23.0		31.6	19.8	15.0
Level of Service	C	B	B	F	C		C	C		C	B	B
Approach Delay (s)		19.3			29.4			24.6			21.6	
Approach LOS		B			C			C			C	

Intersection Summary				
HCM Average Control Delay	22.8	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.59			
Actuated Cycle Length (s)	59.7	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	56.4%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	11	6	10	140	0	128	7	833	200	163	594	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0		4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00		1.00	1.00	0.91		1.00	0.91	
Frt	1.00	0.91		1.00		0.85	1.00	0.97		1.00	1.00	
Flt Protected	0.95	1.00		0.95		1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1692		1770		1583	1770	4938		1770	5083	
Flt Permitted	0.95	1.00		0.95		1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1692		1770		1583	1770	4938		1770	5083	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	12	7	11	156	0	142	8	926	222	181	660	2
RTOR Reduction (vph)	0	11	0	0	0	121	0	52	0	0	0	0
Lane Group Flow (vph)	12	7	0	156	0	21	8	1096	0	181	662	0
Turn Type	Prot			Prot		Prot	Prot			Prot		
Protected Phases	1	6		5	2	2	7	4		3	8	
Permitted Phases												
Actuated Green, G (s)	0.7	1.1		7.1		7.5	0.7	19.5		8.1	26.9	
Effective Green, g (s)	0.7	1.1		7.1		7.5	0.7	19.5		8.1	26.9	
Actuated g/C Ratio	0.01	0.02		0.14		0.14	0.01	0.38		0.16	0.52	
Clearance Time (s)	4.0	4.0		4.0		4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0		3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	24	36		243		229	24	1859		277	2640	
v/s Ratio Prot	0.01	0.00		c0.09		c0.01	0.00	c0.22		c0.10	0.13	
v/s Ratio Perm												
v/c Ratio	0.50	0.20		0.64		0.09	0.33	0.59		0.65	0.25	
Uniform Delay, d1	25.4	24.9		21.1		19.2	25.3	12.9		20.5	6.9	
Progression Factor	1.00	1.00		1.00		1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	15.4	2.7		5.7		0.2	8.0	0.5		5.4	0.1	
Delay (s)	40.8	27.7		26.8		19.4	33.4	13.4		26.0	6.9	
Level of Service	D	C		C		B	C	B		C	A	
Approach Delay (s)		32.9			23.3			13.6			11.0	
Approach LOS		C			C			B			B	

Intersection Summary				
HCM Average Control Delay	14.1	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.54			
Actuated Cycle Length (s)	51.8	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	54.0%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	322	237	123	32	99	17	94	407	39	25	468	273
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85		0.98		1.00	0.99		1.00	0.94	
Flt Protected	0.95	1.00	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583		1814		1770	3493		1770	3344	
Flt Permitted	0.95	1.00	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1583		1814		1770	3493		1770	3344	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	339	249	129	34	104	18	99	428	41	26	493	287
RTOR Reduction (vph)	0	0	98	0	8	0	0	9	0	0	117	0
Lane Group Flow (vph)	339	249	31	0	148	0	99	460	0	26	663	0
Turn Type	Split		Prot	Split			Prot			Prot		
Protected Phases	4	4	4	8	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	14.4	14.4	14.4		8.2		3.6	19.4		1.3	17.1	
Effective Green, g (s)	14.4	14.4	14.4		8.2		3.6	19.4		1.3	17.1	
Actuated g/C Ratio	0.24	0.24	0.24		0.14		0.06	0.33		0.02	0.29	
Clearance Time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	430	452	384		251		107	1143		39	964	
v/s Ratio Prot	c0.19	0.13	0.02		c0.08		c0.06	0.13		0.01	c0.20	
v/s Ratio Perm												
v/c Ratio	0.79	0.55	0.08		0.59		0.93	0.40		0.67	0.69	
Uniform Delay, d1	21.0	19.6	17.3		24.0		27.7	15.5		28.8	18.7	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	9.3	1.5	0.1		3.7		63.1	0.2		35.5	2.1	
Delay (s)	30.3	21.1	17.4		27.7		90.8	15.7		64.3	20.8	
Level of Service	C	C	B		C		F	B		E	C	
Approach Delay (s)		24.8			27.7			28.8			22.2	
Approach LOS		C			C			C			C	

Intersection Summary				
HCM Average Control Delay	25.1	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.71			
Actuated Cycle Length (s)	59.3	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	66.1%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBR	EBR2	NWL2	NWL	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	72	271	315	96	168	142	258	1059	92	182	620	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.97		0.97	0.91		1.00	0.91	
Frt	1.00	0.85	0.85	1.00	0.93		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1583	1583	1770	3277		3433	5024		1770	5036	
Flt Permitted	0.95	1.00	1.00	0.95	0.97		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1583	1583	1770	3277		3433	5024		1770	5036	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	80	301	350	107	187	158	287	1177	102	202	689	48
RTOR Reduction (vph)	0	0	219	0	145	0	0	17	0	0	13	0
Lane Group Flow (vph)	80	301	131	107	200	0	287	1262	0	202	724	0
Turn Type		Perm	Perm	Split			Prot			Prot		
Protected Phases	2			6	6		3	8		7	4	
Permitted Phases		2	2									
Actuated Green, G (s)	16.7	16.7	16.7	4.8	4.8		6.0	15.6		6.9	16.5	
Effective Green, g (s)	16.7	16.7	16.7	4.8	4.8		6.0	15.6		6.9	16.5	
Actuated g/C Ratio	0.28	0.28	0.28	0.08	0.08		0.10	0.26		0.12	0.28	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	493	441	441	142	262		343	1306		204	1385	
v/s Ratio Prot	0.05			0.06	c0.06		0.08	c0.25		c0.11	0.14	
v/s Ratio Perm		c0.19	0.08									
v/c Ratio	0.16	0.68	0.30	0.75	0.76		0.84	0.97		0.99	0.52	
Uniform Delay, d1	16.4	19.3	17.0	27.0	27.0		26.5	21.9		26.5	18.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.7	8.3	1.7	20.0	12.3		16.1	17.3		60.0	0.4	
Delay (s)	17.1	27.6	18.7	47.0	39.4		42.6	39.2		86.5	18.8	
Level of Service	B	C	B	D	D		D	D		F	B	
Approach Delay (s)	22.2				41.2			39.8			33.4	
Approach LOS	C				D			D			C	

Intersection Summary				
HCM Average Control Delay	34.9	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.84			
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	59.4%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	213	25	160	4	11	4	115	24	8	2	7	111
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	237	28	178	4	12	4	128	27	9	2	8	123
Direction, Lane #	SE 1	SE 2	NW 1	NE 1	SW 1							
Volume Total (vph)	264	178	21	163	133							
Volume Left (vph)	237	0	4	128	2							
Volume Right (vph)	0	178	4	9	123							
Hadj (s)	0.48	-0.67	-0.05	0.16	-0.52							
Departure Headway (s)	5.8	4.6	5.3	5.3	4.7							
Degree Utilization, x	0.42	0.23	0.03	0.24	0.18							
Capacity (veh/h)	599	746	617	634	702							
Control Delay (s)	11.8	7.8	8.5	10.0	8.7							
Approach Delay (s)	10.2		8.5	10.0	8.7							
Approach LOS	B		A	B	A							

Intersection Summary				
Delay	9.8			
HCM Level of Service	A			
Intersection Capacity Utilization	41.2%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	116	50	70	55	26	9	108	758	134	6	373	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85		0.99		1.00	0.98		1.00	0.97	
Flt Protected		0.97	1.00		0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1800	1583		1783		1770	3459		1770	3444	
Flt Permitted		0.97	1.00		0.97		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1800	1583		1783		1770	3459		1770	3444	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	129	56	78	61	29	10	120	842	149	7	414	91
RTOR Reduction (vph)	0	0	66	0	6	0	0	15	0	0	21	0
Lane Group Flow (vph)	0	185	12	0	94	0	120	976	0	7	484	0
Turn Type	Split		Prot	Split			Prot			Prot		
Protected Phases	4	4	4	8	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)		8.7	8.7		6.6		5.8	26.3		0.7	21.2	
Effective Green, g (s)		8.7	8.7		6.6		5.8	26.3		0.7	21.2	
Actuated g/C Ratio		0.15	0.15		0.11		0.10	0.45		0.01	0.36	
Clearance Time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		269	236		202		176	1560		21	1252	
v/s Ratio Prot		c0.10	0.01		c0.05		c0.07	c0.28		0.00	0.14	
v/s Ratio Perm												
v/c Ratio		0.69	0.05		0.46		0.68	0.63		0.33	0.39	
Uniform Delay, d1		23.5	21.3		24.2		25.4	12.2		28.6	13.7	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		7.1	0.1		1.7		10.4	0.8		9.1	0.2	
Delay (s)		30.6	21.3		25.9		35.7	13.0		37.7	13.9	
Level of Service		C	C		C		D	B		D	B	
Approach Delay (s)		27.9			25.9			15.5			14.3	
Approach LOS		C			C			B			B	

Intersection Summary					
HCM Average Control Delay	17.3	HCM Level of Service		B	
HCM Volume to Capacity ratio	0.60				
Actuated Cycle Length (s)	58.3	Sum of lost time (s)		12.0	
Intersection Capacity Utilization	50.2%	ICU Level of Service		A	
Analysis Period (min)	15				
c Critical Lane Group					

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	636	137	604	886	0	0	0	0	835	1	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		0.97	0.95					0.95	0.91	0.95
Frt		0.97		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.95	1.00
Satd. Flow (prot)		3445		3433	3539					1681	1612	1504
Flt Permitted		1.00		0.95	1.00					0.95	0.95	1.00
Satd. Flow (perm)		3445		3433	3539					1681	1612	1504
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	707	152	671	984	0	0	0	0	928	1	81
RTOR Reduction (vph)	0	30	0	0	0	0	0	0	0	0	1	50
Lane Group Flow (vph)	0	829	0	671	984	0	0	0	0	473	463	23
Turn Type				Prot						Split		Prot
Protected Phases		4		3	8					6	6	6
Permitted Phases												
Actuated Green, G (s)		16.4		12.8	33.2					18.6	18.6	18.6
Effective Green, g (s)		16.4		12.8	33.2					18.6	18.6	18.6
Actuated g/C Ratio		0.27		0.21	0.56					0.31	0.31	0.31
Clearance Time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		945		735	1965					523	501	468
v/s Ratio Prot		c0.24		c0.20	0.28					0.28	c0.29	0.02
v/s Ratio Perm												
v/c Ratio		0.88		0.91	0.50					0.90	0.92	0.05
Uniform Delay, d1		20.7		23.0	8.2					19.7	19.9	14.4
Progression Factor		1.00		1.00	1.00					1.00	1.00	1.00
Incremental Delay, d2		9.2		15.7	0.2					19.0	22.8	0.0
Delay (s)		29.9		38.6	8.4					38.7	42.7	14.5
Level of Service		C		D	A					D	D	B
Approach Delay (s)		29.9			20.7			0.0			38.8	
Approach LOS		C			C			A			D	

Intersection Summary				
HCM Average Control Delay	28.1	HCM Level of Service		C
HCM Volume to Capacity ratio	0.90			
Actuated Cycle Length (s)	59.8	Sum of lost time (s)		12.0
Intersection Capacity Utilization	80.9%	ICU Level of Service		D
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	123	1380	0	0	1002	780	439	7	667	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	0.97	0.95			0.95	1.00	0.95	0.91	0.95			
Frt	1.00	1.00			1.00	0.85	1.00	0.87	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99	1.00			
Satd. Flow (prot)	3433	3539			3539	1583	1681	1472	1504			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99	1.00			
Satd. Flow (perm)	3433	3539			3539	1583	1681	1472	1504			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	137	1533	0	0	1113	867	488	8	741	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	524	0	12	12	0	0	0
Lane Group Flow (vph)	137	1533	0	0	1113	344	429	396	388	0	0	0
Turn Type	Prot					Prot	Split		Prot			
Protected Phases	7	4			8	8	2	2	2			
Permitted Phases												
Actuated Green, G (s)	3.4	30.3			22.9	22.9	19.5	19.5	19.5			
Effective Green, g (s)	3.4	30.3			22.9	22.9	19.5	19.5	19.5			
Actuated g/C Ratio	0.06	0.52			0.40	0.40	0.34	0.34	0.34			
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0			
Lane Grp Cap (vph)	202	1855			1402	627	567	497	507			
v/s Ratio Prot	0.04	c0.43			0.31	0.22	0.26	c0.27	0.26			
v/s Ratio Perm												
v/c Ratio	0.68	0.83			0.79	0.55	0.76	0.80	0.77			
Uniform Delay, d1	26.7	11.5			15.4	13.5	17.0	17.4	17.1			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	8.7	3.2			3.2	1.0	5.7	8.6	6.8			
Delay (s)	35.4	14.7			18.6	14.4	22.8	26.0	23.9			
Level of Service	D	B			B	B	C	C	C			
Approach Delay (s)		16.4			16.8			24.2			0.0	
Approach LOS		B			B			C			A	

Intersection Summary				
HCM Average Control Delay	18.5	HCM Level of Service		B
HCM Volume to Capacity ratio	0.82			
Actuated Cycle Length (s)	57.8	Sum of lost time (s)		8.0
Intersection Capacity Utilization	80.9%	ICU Level of Service		D
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	38	30	28	476	22	130	75	950	214	205	1405	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.95	0.91	0.95	0.95	0.91	0.95	1.00	0.91		1.00	0.91	
Frt	1.00	0.99	0.85	1.00	0.99	0.85	1.00	0.97		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1681	1668	1504	1681	1613	1504	1770	4945		1770	5072	
Flt Permitted	0.95	1.00	1.00	0.95	0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1681	1668	1504	1681	1613	1504	1770	4945		1770	5072	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	42	33	31	529	24	144	83	1056	238	228	1561	28
RTOR Reduction (vph)	0	3	26	0	2	100	0	35	0	0	2	0
Lane Group Flow (vph)	38	37	2	286	279	30	83	1259	0	228	1587	0
Turn Type	Split		Prot	Split		Prot	Prot			Prot		
Protected Phases	4	4	4	8	8	8	5	2!		6!		
Permitted Phases											6	
Actuated Green, G (s)	5.7	5.7	5.7	17.4	17.4	17.4	4.4	40.2		31.8	31.8	
Effective Green, g (s)	5.7	5.7	5.7	17.4	17.4	17.4	4.4	40.2		31.8	31.8	
Actuated g/C Ratio	0.08	0.08	0.08	0.23	0.23	0.23	0.06	0.53		0.42	0.42	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	127	126	114	388	373	348	103	2640		747	2142	
v/s Ratio Prot	c0.02	0.02	0.00	0.17	c0.17	0.02	c0.05	0.25		0.13		
v/s Ratio Perm											c0.31	
v/c Ratio	0.30	0.30	0.02	0.74	0.75	0.09	0.81	0.48		0.31	0.74	
Uniform Delay, d1	32.9	32.9	32.2	26.8	26.9	22.7	35.0	11.0		14.4	18.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.3	1.3	0.1	7.1	7.9	0.1	35.2	0.1		0.2	1.4	
Delay (s)	34.2	34.2	32.3	34.0	34.9	22.8	70.2	11.1		14.7	19.7	
Level of Service	C	C	C	C	C	C	E	B		B	B	
Approach Delay (s)		33.7			32.2			14.7			19.1	
Approach LOS		C			C			B			B	

Intersection Summary				
HCM Average Control Delay	20.2	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.71			
Actuated Cycle Length (s)	75.3	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	66.2%	ICU Level of Service	C	
Analysis Period (min)	15			

! Phase conflict between lane groups.
c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	166	807	170	341	1014	0	0	660	779
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0	4.0	4.0	4.0	4.0			4.0	4.0
Lane Util. Factor				0.97	0.91	1.00	0.97	0.95			0.86	0.86
Frpb, ped/bikes				1.00	1.00	1.00	1.00	1.00			0.92	1.00
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00			1.00	1.00
Frt				1.00	1.00	0.85	1.00	1.00			0.94	0.85
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				3433	5085	1583	3433	3539			4156	1362
Flt Permitted				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)				3433	5085	1583	3433	3539			4156	1362
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	184	897	189	379	1127	0	0	733	866
RTOR Reduction (vph)	0	0	0	0	0	64	0	0	0	0	10	10
Lane Group Flow (vph)	0	0	0	184	897	125	379	1127	0	0	1156	423
Confl. Peds. (#/hr)												200
Turn Type				Prot		Perm	Prot					Prot
Protected Phases				3	8		5	2			6	6
Permitted Phases						8						
Actuated Green, G (s)				15.8	15.8	15.8	8.0	34.7			22.7	22.7
Effective Green, g (s)				15.8	15.8	15.8	8.0	34.7			22.7	22.7
Actuated g/C Ratio				0.27	0.27	0.27	0.14	0.59			0.39	0.39
Clearance Time (s)				4.0	4.0	4.0	4.0	4.0			4.0	4.0
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)				927	1373	428	469	2099			1613	529
v/s Ratio Prot				0.05	c0.18		c0.11	0.32			0.28	c0.31
v/s Ratio Perm						0.08						
v/c Ratio				0.20	0.65	0.29	0.81	0.54			0.72	0.80
Uniform Delay, d1				16.5	18.9	16.9	24.5	7.1			15.2	15.9
Progression Factor				1.00	1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2				0.1	1.1	0.4	9.9	0.3			1.5	8.5
Delay (s)				16.6	20.1	17.3	34.4	7.4			16.7	24.3
Level of Service				B	C	B	C	A			B	C
Approach Delay (s)		0.0			19.1			14.2			18.8	
Approach LOS		A			B			B			B	

Intersection Summary				
HCM Average Control Delay	17.3	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.75			
Actuated Cycle Length (s)	58.5	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	106.4%	ICU Level of Service	G	
Analysis Period (min)	15			

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	492	989	92	0	0	0	0	817	385	228	585	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Lane Util. Factor	0.91	0.86	0.91					0.86		1.00	0.91	
Frt	1.00	1.00	0.85					0.95		1.00	1.00	
Flt Protected	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	1610	3192	1441					6100		1770	5085	
Flt Permitted	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	1610	3192	1441					6100		1770	5085	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	547	1099	102	0	0	0	0	908	428	253	650	0
RTOR Reduction (vph)	0	1	55	0	0	0	0	49	0	0	0	0
Lane Group Flow (vph)	492	1163	37	0	0	0	0	1287	0	253	650	0
Turn Type	Split		Prot							Prot		
Protected Phases	4	4	4					2		1	6	
Permitted Phases												
Actuated Green, G (s)	30.0	30.0	30.0					20.0		12.6	36.6	
Effective Green, g (s)	30.0	30.0	30.0					20.0		12.6	36.6	
Actuated g/C Ratio	0.40	0.40	0.40					0.27		0.17	0.49	
Clearance Time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	647	1284	579					1635		299	2495	
v/s Ratio Prot	0.31	c0.36	0.03					c0.21		c0.14	0.13	
v/s Ratio Perm												
v/c Ratio	0.76	0.91	0.06					0.89dr		0.85	0.26	
Uniform Delay, d1	19.2	21.0	13.7					25.3		30.1	11.1	
Progression Factor	1.00	1.00	1.00					1.00		1.00	1.00	
Incremental Delay, d2	5.3	9.3	0.0					2.6		19.3	0.1	
Delay (s)	24.5	30.3	13.7					27.9		49.3	11.2	
Level of Service	C	C	B					C		D	B	
Approach Delay (s)		27.8			0.0			27.9			21.8	
Approach LOS		C			A			C			C	

Intersection Summary				
HCM Average Control Delay	26.5	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.86			
Actuated Cycle Length (s)	74.6	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	106.4%	ICU Level of Service	G	
Analysis Period (min)	15			

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group

Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Volume (vph)	66	392	0	364	94	30	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		0.95		1.00	1.00
Frt	1.00	1.00		0.97		1.00	0.85
Flt Protected	0.95	1.00		1.00		0.95	1.00
Satd. Flow (prot)	1770	3539		3431		1770	1583
Flt Permitted	0.95	1.00		1.00		0.95	1.00
Satd. Flow (perm)	1770	3539		3431		1770	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	73	436	0	404	104	33	51
RTOR Reduction (vph)	0	0	0	43	0	0	47
Lane Group Flow (vph)	73	436	0	465	0	33	4
Turn Type	Prot		Prot				Prot
Protected Phases	7	4	3	8		6	6
Permitted Phases							
Actuated Green, G (s)	1.2	14.0		8.8		1.7	1.7
Effective Green, g (s)	1.2	14.0		8.8		1.7	1.7
Actuated g/C Ratio	0.05	0.59		0.37		0.07	0.07
Clearance Time (s)	4.0	4.0		4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0		3.0	3.0
Lane Grp Cap (vph)	90	2091		1274		127	114
v/s Ratio Prot	c0.04	0.12		c0.14		c0.02	0.00
v/s Ratio Perm							
v/c Ratio	0.81	0.21		0.36		0.26	0.03
Uniform Delay, d1	11.1	2.3		5.4		10.4	10.2
Progression Factor	1.00	1.00		1.00		1.00	1.00
Incremental Delay, d2	40.5	0.0		0.2		1.1	0.1
Delay (s)	51.6	2.3		5.6		11.5	10.3
Level of Service	D	A		A		B	B
Approach Delay (s)		9.4		5.6		10.8	
Approach LOS		A		A		B	

Intersection Summary				
HCM Average Control Delay	7.7	HCM Level of Service	A	
HCM Volume to Capacity ratio	0.40			
Actuated Cycle Length (s)	23.7	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	30.1%	ICU Level of Service	A	
Analysis Period (min)	15			

c Critical Lane Group

Movement	EBL	EBR	EBR2	WBL	WBT	WBR	NBL	NBT	NBR2	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	120	284	290	31	157	96	312	821	111	264	140	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.88	1.00	1.00	1.00		1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.85	0.85	1.00	0.94		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	2787	1583	1770	1756		1770	3539	1583	3433	3539	1583
Flt Permitted	0.59	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1094	2787	1583	1770	1756		1770	3539	1583	3433	3539	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	133	316	322	34	174	107	347	912	123	293	156	160
RTOR Reduction (vph)	0	0	254	0	34	0	0	0	80	0	0	121
Lane Group Flow (vph)	133	316	68	34	247	0	347	912	43	293	156	39
Turn Type	custom	custom	custom	Prot			Prot		Prot	Prot		Prot
Protected Phases				3	8		5	2	2	1	6	6
Permitted Phases	4	4	4									
Actuated Green, G (s)	12.6	12.6	12.6	1.5	18.1		15.1	21.1	21.1	8.5	14.5	14.5
Effective Green, g (s)	12.6	12.6	12.6	1.5	18.1		15.1	21.1	21.1	8.5	14.5	14.5
Actuated g/C Ratio	0.21	0.21	0.21	0.03	0.30		0.25	0.35	0.35	0.14	0.24	0.24
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	231	588	334	44	532		448	1251	559	489	860	384
v/s Ratio Prot				0.02	c0.14		c0.20	c0.26	0.03	0.09	0.04	0.02
v/s Ratio Perm	c0.12	0.11	0.04									
v/c Ratio	0.58	0.54	0.20	0.77	0.46		0.77	0.73	0.08	0.60	0.18	0.10
Uniform Delay, d1	21.1	21.0	19.4	28.9	16.9		20.7	16.8	12.8	24.0	17.9	17.5
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.4	0.9	0.3	57.0	0.6		8.2	2.2	0.1	2.0	0.1	0.1
Delay (s)	24.6	21.9	19.7	85.9	17.5		28.9	19.0	12.9	26.0	18.0	17.7
Level of Service	C	C	B	F	B		C	B	B	C	B	B
Approach Delay (s)					24.9			20.9			21.8	
Approach LOS					C			C			C	

Intersection Summary				
HCM Average Control Delay	21.6	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.69			
Actuated Cycle Length (s)	59.7	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	64.3%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	908	0	92	0	0	0	0	342	43	348	108	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95	1.00					0.95		0.97	0.95	
Frt	1.00	1.00	0.85					0.98		1.00	1.00	
Flt Protected	0.95	0.95	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	1681	1681	1583					3480		3433	3539	
Flt Permitted	0.95	0.95	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	1681	1681	1583					3480		3433	3539	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1009	0	102	0	0	0	0	380	48	387	120	0
RTOR Reduction (vph)	0	0	63	0	0	0	0	18	0	0	0	0
Lane Group Flow (vph)	504	505	39	0	0	0	0	410	0	387	120	0
Turn Type	Split		Prot							Prot		
Protected Phases	4	4	4					2		1	6	
Permitted Phases												
Actuated Green, G (s)	20.1	20.1	20.1					11.9		8.9	24.8	
Effective Green, g (s)	20.1	20.1	20.1					11.9		8.9	24.8	
Actuated g/C Ratio	0.38	0.38	0.38					0.22		0.17	0.47	
Clearance Time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	639	639	601					783		578	1659	
v/s Ratio Prot	0.30	c0.30	0.02					c0.12		c0.11	0.03	
v/s Ratio Perm												
v/c Ratio	0.79	0.79	0.06					0.52		0.67	0.07	
Uniform Delay, d1	14.5	14.5	10.4					18.0		20.6	7.7	
Progression Factor	1.00	1.00	1.00					1.00		1.00	1.00	
Incremental Delay, d2	6.4	6.6	0.0					0.6		2.9	0.0	
Delay (s)	20.9	21.1	10.5					18.6		23.6	7.7	
Level of Service	C	C	B					B		C	A	
Approach Delay (s)		20.1			0.0			18.6			19.8	
Approach LOS		C			A			B			B	

Intersection Summary				
HCM Average Control Delay	19.7	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.69			
Actuated Cycle Length (s)	52.9	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	55.9%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	127	476	47	91	426	400	57	128	104	230	52	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		0.97	1.00	
Frt	1.00	0.99		1.00	0.93		1.00	0.93		1.00	0.92	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3492		1770	3282		1770	1737		3433	1708	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3492		1770	3282		1770	1737		3433	1708	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	141	529	52	101	473	444	63	142	116	256	58	72
RTOR Reduction (vph)	0	8	0	0	202	0	0	37	0	0	50	0
Lane Group Flow (vph)	141	573	0	101	715	0	63	221	0	256	80	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												
Actuated Green, G (s)	8.8	20.5		7.6	19.3		4.9	15.4		8.7	19.2	
Effective Green, g (s)	8.8	20.5		7.6	19.3		4.9	15.4		8.7	19.2	
Actuated g/C Ratio	0.13	0.30		0.11	0.28		0.07	0.23		0.13	0.28	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	228	1050		197	929		127	392		438	481	
v/s Ratio Prot	c0.08	0.16		0.06	c0.22		0.04	c0.13		c0.07	c0.05	
v/s Ratio Perm												
v/c Ratio	0.62	0.55		0.51	0.77		0.50	0.56		0.58	0.17	
Uniform Delay, d1	28.1	20.0		28.6	22.4		30.5	23.4		28.0	18.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.9	0.6		2.2	3.9		3.0	1.9		2.0	0.2	
Delay (s)	33.0	20.5		30.8	26.3		33.5	25.3		30.0	18.6	
Level of Service	C	C		C	C		C	C		C	B	
Approach Delay (s)		23.0			26.7			26.9			26.2	
Approach LOS		C			C			C			C	

Intersection Summary				
HCM Average Control Delay	25.6	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.68			
Actuated Cycle Length (s)	68.2	Sum of lost time (s)	20.0	
Intersection Capacity Utilization	64.6%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	WBL	WBR	SEL	SET	NWT	NWR	NWR2	SWL	SWR
Lane Configurations									
Volume (vph)	0	0	269	494	621	0	190	147	266
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor			0.97	0.95	0.95		1.00	0.97	1.00
Frt			1.00	1.00	1.00		0.85	1.00	0.85
Flt Protected			0.95	1.00	1.00		1.00	0.95	1.00
Satd. Flow (prot)			3433	3539	3539		1583	3433	1583
Flt Permitted			0.95	1.00	1.00		1.00	0.95	1.00
Satd. Flow (perm)			3433	3539	3539		1583	3433	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	299	549	690	0	211	163	296
RTOR Reduction (vph)	0	0	0	0	0	0	136	0	243
Lane Group Flow (vph)	0	0	299	549	690	0	75	163	53
Turn Type			Prot				Perm		Perm
Protected Phases			5	2	6			4	
Permitted Phases							6		4
Actuated Green, G (s)			9.5	29.8	16.3		16.3	8.3	8.3
Effective Green, g (s)			9.5	29.8	16.3		16.3	8.3	8.3
Actuated g/C Ratio			0.21	0.65	0.35		0.35	0.18	0.18
Clearance Time (s)			4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)			3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)			707	2288	1251		560	618	285
v/s Ratio Prot			c0.09	0.16	c0.19			c0.05	
v/s Ratio Perm							0.05		0.03
v/c Ratio			0.42	0.24	0.55		0.13	0.26	0.19
Uniform Delay, d1			15.9	3.4	12.0		10.1	16.3	16.0
Progression Factor			1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2			0.4	0.1	0.5		0.1	0.2	0.3
Delay (s)			16.3	3.5	12.5		10.2	16.5	16.4
Level of Service			B	A	B		B	B	B
Approach Delay (s)	0.0			8.0	12.0			16.4	
Approach LOS	A			A	B			B	

Intersection Summary				
HCM Average Control Delay	11.4	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.45			
Actuated Cycle Length (s)	46.1	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	40.3%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL2	EBL	EBR	SEL	SET	SER	NWL	NWT	NWR	SWL	SWR
Lane Configurations											
Volume (vph)	399	0	241	285	375	0	0	401	255	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		
Lane Util. Factor	0.95	0.95	1.00	0.97	0.95			0.95	1.00		
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		
Flt Protected	0.95	0.95	1.00	0.95	1.00			1.00	1.00		
Satd. Flow (prot)	1681	1681	1583	3433	3539			3539	1583		
Flt Permitted	0.95	0.95	1.00	0.95	1.00			1.00	1.00		
Satd. Flow (perm)	1681	1681	1583	3433	3539			3539	1583		
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	443	0	268	317	417	0	0	446	283	0	0
RTOR Reduction (vph)	0	0	192	0	0	0	0	0	200	0	0
Lane Group Flow (vph)	221	222	76	317	417	0	0	446	83	0	0
Turn Type	Split		Prot	Prot					Prot		
Protected Phases	4	4	4	1	6			2	2		
Permitted Phases											
Actuated Green, G (s)	11.4	11.4	11.4	5.2	21.0			11.8	11.8		
Effective Green, g (s)	11.4	11.4	11.4	5.2	21.0			11.8	11.8		
Actuated g/C Ratio	0.28	0.28	0.28	0.13	0.52			0.29	0.29		
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0		
Lane Grp Cap (vph)	474	474	447	442	1840			1034	462		
v/s Ratio Prot	0.13	c0.13	0.05	c0.09	0.12			c0.13	0.05		
v/s Ratio Perm											
v/c Ratio	0.47	0.47	0.17	0.72	0.23			0.43	0.18		
Uniform Delay, d1	12.0	12.0	10.9	16.9	5.3			11.6	10.7		
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00	1.00		
Incremental Delay, d2	0.7	0.7	0.2	5.5	0.1			0.3	0.2		
Delay (s)	12.7	12.7	11.1	22.4	5.3			11.9	10.9		
Level of Service	B	B	B	C	A			B	B		
Approach Delay (s)		12.1			12.7			11.5		0.0	
Approach LOS		B			B			B		A	

Intersection Summary			
HCM Average Control Delay	12.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	40.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	40.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	5	5	4	55	12	10	12	771	100	15	441	10
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	6	6	4	61	13	11	13	857	111	17	490	11

Direction, Lane #	EB 1	WB 1	NE 1	NE 2	SW 1	SW 2
Volume Total (vph)	16	86	442	539	262	256
Volume Left (vph)	6	61	13	0	17	0
Volume Right (vph)	4	11	0	111	0	11
Hadj (s)	-0.07	0.10	0.05	-0.11	0.07	0.00
Departure Headway (s)	6.7	6.6	5.5	5.4	6.1	6.0
Degree Utilization, x	0.03	0.16	0.68	0.81	0.44	0.43
Capacity (veh/h)	498	513	634	659	575	580
Control Delay (s)	9.9	10.9	18.2	25.6	12.6	12.2
Approach Delay (s)	9.9	10.9	22.3		12.4	
Approach LOS	A	B	C		B	

Intersection Summary			
Delay	18.4		
HCM Level of Service	C		
Intersection Capacity Utilization	47.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	378	386	310	507	8	393	5	154	1	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.95	1.00		0.98	
Satd. Flow (prot)	1770	1863	1583	1770	1858			1775	1583		1750	
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.95	1.00		0.98	
Satd. Flow (perm)	1770	1863	1583	1770	1858			1775	1583		1750	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	2	420	429	344	563	9	437	6	171	1	1	1
RTOR Reduction (vph)	0	0	235	0	0	0	0	0	122	0	1	0
Lane Group Flow (vph)	2	420	194	344	572	0	0	443	49	0	2	0
Turn Type	Prot		Prot	Prot			Split		Prot	Split		
Protected Phases	7	4	4	3	8		2	2	2	6	6	
Permitted Phases												
Actuated Green, G (s)	0.8	25.7	25.7	19.6	44.5			25.3	25.3		1.1	
Effective Green, g (s)	0.8	25.7	25.7	19.6	44.5			25.3	25.3		1.1	
Actuated g/C Ratio	0.01	0.29	0.29	0.22	0.51			0.29	0.29		0.01	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	16	546	464	396	943			512	457		22	
v/s Ratio Prot	0.00	c0.23	0.12	c0.19	0.31			c0.25	0.03		c0.00	
v/s Ratio Perm												
v/c Ratio	0.12	0.77	0.42	0.87	0.61			0.87	0.11		0.09	
Uniform Delay, d1	43.1	28.3	25.0	32.8	15.4			29.6	22.9		42.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	3.5	6.5	0.6	17.9	1.1			14.2	0.1		1.8	
Delay (s)	46.6	34.7	25.6	50.7	16.5			43.8	23.0		44.6	
Level of Service	D	C	C	D	B			D	C		D	
Approach Delay (s)		30.2			29.3			38.0			44.6	
Approach LOS		C			C			D			D	

Intersection Summary				
HCM Average Control Delay	31.9	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.82			
Actuated Cycle Length (s)	87.7	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	75.8%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Volume (vph)	406	308	0	200	286	289	441
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00		1.00	1.00	1.00	0.95
Frt	1.00	0.85		1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00		1.00	1.00	0.95	1.00
Satd. Flow (prot)	3433	1583		1863	1583	1770	3539
Flt Permitted	0.95	1.00		1.00	1.00	0.95	1.00
Satd. Flow (perm)	3433	1583		1863	1583	1770	3539
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	451	342	0	222	318	321	490
RTOR Reduction (vph)	0	256	0	0	243	0	0
Lane Group Flow (vph)	451	86	0	222	75	321	490
Turn Type		Perm	Prot		Perm	Prot	
Protected Phases	1		3	8		7	
Permitted Phases		1			8		6
Actuated Green, G (s)	13.0	13.0		12.1	12.1	14.3	13.0
Effective Green, g (s)	13.0	13.0		12.1	12.1	14.3	13.0
Actuated g/C Ratio	0.25	0.25		0.24	0.24	0.28	0.25
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	868	400		439	373	492	895
v/s Ratio Prot	0.13			c0.12		c0.18	
v/s Ratio Perm		0.05			0.05		c0.14
v/c Ratio	0.52	0.22		0.51	0.20	0.65	0.55
Uniform Delay, d1	16.5	15.2		17.1	15.8	16.4	16.6
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5	0.3		0.9	0.3	3.1	0.7
Delay (s)	17.0	15.4		18.0	16.0	19.5	17.3
Level of Service	B	B		B	B	B	B
Approach Delay (s)	16.4			16.8			18.2
Approach LOS	B			B			B

Intersection Summary				
HCM Average Control Delay	17.2	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.57			
Actuated Cycle Length (s)	51.4	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	48.1%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Volume (vph)	87	7	0	462	52	3	856
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0		4.0	4.0
Lane Util. Factor	0.97			0.95		1.00	0.95
Frt	0.99			0.98		1.00	1.00
Flt Protected	0.96			1.00		0.95	1.00
Satd. Flow (prot)	3415			3485		1770	3539
Flt Permitted	0.96			1.00		0.95	1.00
Satd. Flow (perm)	3415			3485		1770	3539
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	97	8	0	513	58	3	951
RTOR Reduction (vph)	7	0	0	13	0	0	0
Lane Group Flow (vph)	98	0	0	558	0	3	951
Turn Type			Prot			Prot	
Protected Phases	8		5	2		1	6
Permitted Phases							
Actuated Green, G (s)	3.2			15.1		0.6	19.7
Effective Green, g (s)	3.2			15.1		0.6	19.7
Actuated g/C Ratio	0.10			0.49		0.02	0.64
Clearance Time (s)	4.0			4.0		4.0	4.0
Vehicle Extension (s)	3.0			3.0		3.0	3.0
Lane Grp Cap (vph)	354			1703		34	2256
v/s Ratio Prot	c0.03			0.16		0.00	c0.27
v/s Ratio Perm							
v/c Ratio	0.28			0.33		0.09	0.42
Uniform Delay, d1	12.8			4.8		14.9	2.8
Progression Factor	1.00			1.00		1.00	1.00
Incremental Delay, d2	0.4			0.1		1.1	0.1
Delay (s)	13.2			4.9		16.0	2.9
Level of Service	B			A		B	A
Approach Delay (s)	13.2			4.9			2.9
Approach LOS	B			A			A

Intersection Summary			
HCM Average Control Delay	4.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	30.9	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	24	114	20	64	84	153	6	315	15	165	701	107
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	0.90		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1821		1770	1682		1770	3515		1770	3469	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1821		1770	1682		1770	3515		1770	3469	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	127	22	71	93	170	7	350	17	183	779	119
RTOR Reduction (vph)	0	11	0	0	113	0	0	6	0	0	17	0
Lane Group Flow (vph)	27	138	0	71	150	0	7	361	0	183	881	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	0.7	10.7		2.3	12.3		0.7	14.0		6.4	19.7	
Effective Green, g (s)	0.7	10.7		2.3	12.3		0.7	14.0		6.4	19.7	
Actuated g/C Ratio	0.01	0.22		0.05	0.25		0.01	0.28		0.13	0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	25	394		82	419		25	996		229	1383	
v/s Ratio Prot	0.02	0.08		c0.04	c0.09		0.00	0.10		c0.10	c0.25	
v/s Ratio Perm												
v/c Ratio	1.08	0.35		0.87	0.36		0.28	0.36		0.80	0.64	
Uniform Delay, d1	24.4	16.4		23.4	15.3		24.1	14.1		20.9	12.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	205.9	0.5		56.7	0.5		6.0	0.2		17.5	1.0	
Delay (s)	230.3	16.9		80.1	15.8		30.1	14.4		38.3	12.9	
Level of Service	F	B		F	B		C	B		D	B	
Approach Delay (s)		49.7			29.5			14.7			17.2	
Approach LOS		D			C			B			B	

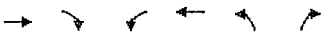
Intersection Summary			
HCM Average Control Delay	21.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	49.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	85	72	95	141	37	41	335	56	42	791	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.97		1.00	0.98		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1805		1770	3463		1770	3534	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1583	1770	1805		1770	3463		1770	3534	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	6	94	80	106	157	41	46	372	62	47	879	8
RTOR Reduction (vph)	0	0	65	0	17	0	0	20	0	0	1	0
Lane Group Flow (vph)	6	94	15	106	181	0	46	414	0	47	886	0
Turn Type	Prot		Perm	Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	0.6	8.7	8.7	3.5	11.6		1.4	18.2		1.4	18.2	
Effective Green, g (s)	0.6	8.7	8.7	3.5	11.6		1.4	18.2		1.4	18.2	
Actuated g/C Ratio	0.01	0.18	0.18	0.07	0.24		0.03	0.38		0.03	0.38	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	22	339	288	130	438		52	1319		52	1346	
v/s Ratio Prot	0.00	0.05		c0.06	c0.10		0.03	0.12		c0.03	c0.25	
v/s Ratio Perm			0.01									
v/c Ratio	0.27	0.28	0.05	0.82	0.41		0.88	0.31		0.90	0.66	
Uniform Delay, d1	23.4	16.8	16.1	21.8	15.2		23.1	10.4		23.1	12.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	6.6	0.4	0.1	31.0	0.6		82.7	0.1		89.2	1.2	
Delay (s)	30.0	17.3	16.2	52.8	15.9		105.8	10.5		112.4	13.4	
Level of Service	C	B	B	D	B		F	B		F	B	
Approach Delay (s)		17.2			28.8			19.7			18.4	
Approach LOS		B			C			B			B	

Intersection Summary				
HCM Average Control Delay	20.3	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.62			
Actuated Cycle Length (s)	47.8	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	47.4%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	96	880	24	89	881	202	70	58	85	458	23	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.95			1.00	1.00	0.95	0.95	
Frt	1.00	1.00		1.00	0.97			1.00	0.85	1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00	0.95	0.97	
Satd. Flow (prot)	1770	5065		1770	3440			1813	1583	1681	1639	
Flt Permitted	0.95	1.00		0.95	1.00			0.97	1.00	0.95	0.97	
Satd. Flow (perm)	1770	5065		1770	3440			1813	1583	1681	1639	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	107	978	27	99	979	224	78	64	94	509	26	93
RTOR Reduction (vph)	0	3	0	0	21	0	0	0	81	0	17	0
Lane Group Flow (vph)	107	1002	0	99	1182	0	0	142	13	321	290	0
Turn Type	Prot			Prot			Split		Prot	Split		
Protected Phases	7	4		3	8		2	2	2	6	6	
Permitted Phases												
Actuated Green, G (s)	6.6	31.0		7.8	32.2			11.8	11.8	18.2	18.2	
Effective Green, g (s)	6.6	31.0		7.8	32.2			11.8	11.8	18.2	18.2	
Actuated g/C Ratio	0.08	0.37		0.09	0.38			0.14	0.14	0.21	0.21	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	138	1852		163	1306			252	220	361	352	
v/s Ratio Prot	c0.06	0.20		0.06	c0.34			c0.08	0.01	c0.19	0.18	
v/s Ratio Perm												
v/c Ratio	0.78	0.54		0.61	0.90			0.56	0.06	0.89	0.82	
Uniform Delay, d1	38.4	21.3		37.0	24.9			34.1	31.7	32.3	31.8	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2	23.3	0.3		6.3	9.1			2.9	0.1	22.3	14.4	
Delay (s)	61.7	21.6		43.3	33.9			37.0	31.8	54.7	46.1	
Level of Service	E	C		D	C			D	C	D	D	
Approach Delay (s)		25.5			34.7			34.9			50.5	
Approach LOS		C			C			C			D	

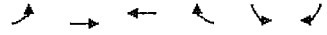
Intersection Summary				
HCM Average Control Delay	34.6	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.78			
Actuated Cycle Length (s)	84.8	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	68.6%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑			↑↑		↱
Volume (veh/h)	1435	55	0	1382	0	135
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	1594	61	0	1536	0	150
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	575			607		
pX, platoon unblocked			0.86		0.86	0.86
vC, conflicting volume			1656		2393	562
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1204		2058	0
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	84
cM capacity (veh/h)			496		41	936

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1
Volume Total	638	638	380	768	768	150
Volume Left	0	0	0	0	0	0
Volume Right	0	0	61	0	0	150
cSH	1700	1700	1700	1700	1700	936
Volume to Capacity	0.38	0.38	0.22	0.45	0.45	0.16
Queue Length 95th (ft)	0	0	0	0	0	14
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	9.6
Lane LOS						A
Approach Delay (s)	0.0			0.0		9.6
Approach LOS						A

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	44.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↰↰↑	↱
Volume (vph)	0	784	1041	0	1001	336
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		0.97	0.91
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3539	3539		3430	1441
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3539	3539		3430	1441
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	871	1157	0	1112	373
RTOR Reduction (vph)	0	0	0	0	5	13
Lane Group Flow (vph)	0	871	1157	0	1144	323
Turn Type						Prot
Protected Phases		4	8		6	6
Permitted Phases						
Actuated Green, G (s)		17.5	17.5		17.9	17.9
Effective Green, g (s)		17.5	17.5		17.9	17.9
Actuated g/C Ratio		0.40	0.40		0.41	0.41
Clearance Time (s)		4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1427	1427		1415	594
v/s Ratio Prot		0.25	c0.33		c0.33	0.22
v/s Ratio Perm						
v/c Ratio		0.61	0.81		0.81	0.54
Uniform Delay, d1		10.3	11.5		11.2	9.7
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		0.8	3.6		3.5	1.0
Delay (s)		11.0	15.1		14.7	10.7
Level of Service		B	B		B	B
Approach Delay (s)		11.0	15.1		13.8	
Approach LOS		B	B		B	

Intersection Summary			
HCM Average Control Delay	13.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	43.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	118.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	231	1475	0	0	1517	934	384	59	1062	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	0.97	0.95			0.91	1.00	0.95	0.91	0.95			
Frt	1.00	1.00			1.00	0.85	1.00	0.88	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (prot)	3433	3539			5085	1583	1681	1478	1504			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (perm)	3433	3539			5085	1583	1681	1478	1504			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	257	1639	0	0	1686	1038	427	66	1180	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	480	0	6	6	0	0	0
Lane Group Flow (vph)	257	1639	0	0	1686	558	384	646	631	0	0	0
Turn Type	Prot					Prot	Split		Prot			
Protected Phases	7	4			8	8	2	2	2			
Permitted Phases												
Actuated Green, G (s)	7.4	44.0			32.6	32.6	38.0	38.0	38.0			
Effective Green, g (s)	7.4	44.0			32.6	32.6	38.0	38.0	38.0			
Actuated g/C Ratio	0.08	0.49			0.36	0.36	0.42	0.42	0.42			
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0			
Lane Grp Cap (vph)	282	1730			1842	573	710	624	635			
v/s Ratio Prot	0.07	c0.46			0.33	0.35	0.23	c0.44	0.42			
v/s Ratio Perm												
v/c Ratio	0.91	0.95			0.92	0.97	0.54	1.03	0.99			
Uniform Delay, d1	41.0	21.9			27.4	28.3	19.5	26.0	25.9			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	31.4	11.4			7.5	30.9	0.8	45.3	33.8			
Delay (s)	72.4	33.3			34.9	59.2	20.3	71.3	59.7			
Level of Service	E	C			C	E	C	E	E			
Approach Delay (s)		38.6			44.2			55.2			0.0	
Approach LOS		D			D			E			A	

Intersection Summary				
HCM Average Control Delay	45.4	HCM Level of Service	D	
HCM Volume to Capacity ratio	0.99			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	97.4%	ICU Level of Service	F	
Analysis Period (min)	15			

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	111	1722	694	100	1927	66	201	10	38	106	59	312
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		0.97	0.95		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.88		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5060		3433	3119		1770	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5060		3433	3119		1770	1863	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	123	1913	771	111	2141	73	223	11	42	118	66	347
RTOR Reduction (vph)	0	0	369	0	4	0	0	37	0	0	0	128
Lane Group Flow (vph)	123	1913	402	111	2210	0	223	16	0	118	66	219
Turn Type	Prot		Prot	Prot			Prot				Prot	
Protected Phases	7	4	4	3	8		5	2		1	6	6
Permitted Phases												
Actuated Green, G (s)	7.6	41.9	41.9	6.9	41.2		7.0	10.7		13.2	16.9	16.9
Effective Green, g (s)	7.6	41.9	41.9	6.9	41.2		7.0	10.7		13.2	16.9	16.9
Actuated g/C Ratio	0.09	0.47	0.47	0.08	0.46		0.08	0.12		0.15	0.19	0.19
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	152	2402	748	138	2350		271	376		263	355	302
v/s Ratio Prot	c0.07	0.38	0.25	0.06	c0.44		c0.06	0.01		0.07	0.04	c0.14
v/s Ratio Perm												
v/c Ratio	0.81	0.80	0.54	0.80	0.94		0.82	0.04		0.45	0.19	0.73
Uniform Delay, d1	39.8	19.8	16.5	40.2	22.6		40.2	34.5		34.4	30.1	33.7
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	26.2	1.9	0.7	27.7	8.3		17.9	0.0		1.2	0.3	8.4
Delay (s)	66.0	21.7	17.3	68.0	30.9		58.2	34.5		35.7	30.4	42.1
Level of Service	E	C	B	E	C		E	C		D	C	D
Approach Delay (s)		22.4			32.7			53.6			39.2	
Approach LOS		C			C			D			D	

Intersection Summary				
HCM Average Control Delay	29.4	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.87			
Actuated Cycle Length (s)	88.7	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	73.8%	ICU Level of Service	D	
Analysis Period (min)	15			

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↱	↰	↑↑↑	↰↰	↱
Volume (vph)	1854	205	123	2084	40	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	5085	1583	1770	5085	3433	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	5085	1583	1770	5085	3433	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	2060	228	137	2316	44	27
RTOR Reduction (vph)	0	92	0	0	0	25
Lane Group Flow (vph)	2060	136	137	2316	44	2
Turn Type		Prot	Prot			Perm
Protected Phases	4	4	3	8	2	
Permitted Phases						2
Actuated Green, G (s)	30.6	30.6	5.3	39.9	3.5	3.5
Effective Green, g (s)	30.6	30.6	5.3	39.9	3.5	3.5
Actuated g/C Ratio	0.60	0.60	0.10	0.78	0.07	0.07
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	3027	942	183	3947	234	108
v/s Ratio Prot	c0.41	0.09	0.08	c0.46	c0.01	
v/s Ratio Perm						0.00
v/c Ratio	0.68	0.14	0.75	0.59	0.19	0.02
Uniform Delay, d1	7.1	4.6	22.4	2.4	22.6	22.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.6	0.1	15.4	0.2	0.4	0.1
Delay (s)	7.7	4.7	37.8	2.6	23.0	22.4
Level of Service	A	A	D	A	C	C
Approach Delay (s)	7.4			4.6	22.8	
Approach LOS	A			A	C	

Intersection Summary				
HCM Average Control Delay	6.2	HCM Level of Service		A
HCM Volume to Capacity ratio	0.65			
Actuated Cycle Length (s)	51.4	Sum of lost time (s)		12.0
Intersection Capacity Utilization	56.0%	ICU Level of Service		B
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↱	↰↰	↑↑↑	↰	↱
Volume (vph)	1713	165	82	2175	32	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	0.97	0.91	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	5085	1583	3433	5085	1770	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	5085	1583	3433	5085	1770	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1903	183	91	2417	36	18
RTOR Reduction (vph)	0	66	0	0	0	17
Lane Group Flow (vph)	1903	117	91	2417	36	1
Turn Type		Prot	Prot			Perm
Protected Phases	4	4	3	8	2	
Permitted Phases						2
Actuated Green, G (s)	30.2	30.2	2.6	36.8	2.6	2.6
Effective Green, g (s)	30.2	30.2	2.6	36.8	2.6	2.6
Actuated g/C Ratio	0.64	0.64	0.05	0.78	0.05	0.05
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	3240	1009	188	3948	97	87
v/s Ratio Prot	0.37	0.07	0.03	c0.48	c0.02	
v/s Ratio Perm						0.00
v/c Ratio	0.59	0.12	0.48	0.61	0.37	0.01
Uniform Delay, d1	5.0	3.4	21.7	2.3	21.6	21.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	0.1	2.0	0.3	2.4	0.1
Delay (s)	5.3	3.4	23.7	2.5	24.0	21.2
Level of Service	A	A	C	A	C	C
Approach Delay (s)	5.1			3.3	23.1	
Approach LOS	A			A	C	

Intersection Summary				
HCM Average Control Delay	4.3	HCM Level of Service		A
HCM Volume to Capacity ratio	0.60			
Actuated Cycle Length (s)	47.4	Sum of lost time (s)		8.0
Intersection Capacity Utilization	52.0%	ICU Level of Service		A
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	225	929	388	305	1545	95	249	109	90	164	337	442
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.91		0.97	0.91		0.97	0.91	1.00	0.97	0.91	
Frt	1.00	0.96		1.00	0.99		1.00	1.00	0.85	1.00	0.91	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	4861		3433	5041		3433	5085	1583	3433	4652	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3433	4861		3433	5041		3433	5085	1583	3433	4652	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	250	1032	431	339	1717	106	277	121	100	182	374	491
RTOR Reduction (vph)	0	93	0	0	9	0	0	0	76	0	156	0
Lane Group Flow (vph)	250	1370	0	339	1814	0	277	121	24	182	709	0
Turn Type	Prot			Prot			Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Actuated Green, G (s)	7.1	26.5		10.7	30.1		8.0	18.6	18.6	6.6	17.2	
Effective Green, g (s)	7.1	26.5		10.7	30.1		8.0	18.6	18.6	6.6	17.2	
Actuated g/C Ratio	0.09	0.34		0.14	0.38		0.10	0.24	0.24	0.08	0.22	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	311	1643		469	1935		350	1206	376	289	1021	
v/s Ratio Prot	0.07	0.28		c0.10	c0.36		c0.08	0.02		0.05	c0.15	
v/s Ratio Perm									0.01			
v/c Ratio	0.80	0.83		0.72	0.94		0.79	0.10	0.06	0.63	0.98dr	
Uniform Delay, d1	35.0	23.9		32.4	23.2		34.4	23.4	23.2	34.7	28.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	13.9	3.8		5.4	9.3		11.6	0.0	0.1	4.3	2.1	
Delay (s)	48.9	27.7		37.9	32.6		46.0	23.4	23.2	39.0	30.2	
Level of Service	D	C		D	C		D	C	C	D	C	
Approach Delay (s)		30.8			33.4			35.9			31.8	
Approach LOS		C			C			D			C	

Intersection Summary				
HCM Average Control Delay	32.5	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.84			
Actuated Cycle Length (s)	78.4	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	75.3%	ICU Level of Service	D	
Analysis Period (min)	15			

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	148	630	291	280	1248	174	428	188	111	146	185	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	0.97	0.91		0.97	0.91		0.97	0.91		1.00	0.95	
Frt	1.00	0.95		1.00	0.98		1.00	0.94		1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	4844		3433	4992		3433	4803		1770	3302	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	4844		3433	4992		3433	4803		1770	3302	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	164	700	323	311	1387	193	476	209	123	162	206	167
RTOR Reduction (vph)	0	105	0	0	22	0	0	100	0	0	137	0
Lane Group Flow (vph)	164	918	0	311	1558	0	476	232	0	162	236	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	5.0	20.1		9.2	24.3		11.9	12.3		9.6	10.0	
Effective Green, g (s)	5.0	20.1		9.2	24.3		11.9	12.3		9.6	10.0	
Actuated g/C Ratio	0.07	0.30		0.14	0.36		0.18	0.18		0.14	0.15	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	255	1449		470	1805		608	879		253	491	
v/s Ratio Prot	0.05	0.19		c0.09	c0.31		c0.14	0.05		0.09	c0.07	
v/s Ratio Perm												
v/c Ratio	0.64	0.63		0.66	0.86		0.78	0.26		0.64	0.48	
Uniform Delay, d1	30.2	20.4		27.5	19.9		26.4	23.6		27.2	26.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	5.5	0.9		3.5	4.5		6.5	0.2		5.4	0.7	
Delay (s)	35.7	21.3		31.0	24.4		32.9	23.7		32.6	27.0	
Level of Service	D	C		C	C		C	C		C	C	
Approach Delay (s)		23.3			25.5			29.2			28.7	
Approach LOS		C			C			C			C	

Intersection Summary				
HCM Average Control Delay	26.0	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.71			
Actuated Cycle Length (s)	67.2	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	67.7%	ICU Level of Service	C	
Analysis Period (min)	15			

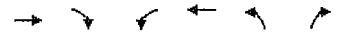
c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	212	653	121	81	1097	216	112	156	11	56	62	129
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.99		1.00	0.90	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	4966		1770	4960		1770	1845		1770	1674	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	4966		1770	4960		1770	1845		1770	1674	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	236	726	134	90	1219	240	124	173	12	62	69	143
RTOR Reduction (vph)	0	29	0	0	34	0	0	3	0	0	102	0
Lane Group Flow (vph)	236	831	0	90	1425	0	124	182	0	62	110	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	12.5	31.2		6.8	25.5		6.1	13.9		3.9	11.7	
Effective Green, g (s)	12.5	31.2		6.8	25.5		6.1	13.9		3.9	11.7	
Actuated g/C Ratio	0.17	0.43		0.09	0.36		0.08	0.19		0.05	0.16	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	308	2158		168	1762		150	357		96	273	
v/s Ratio Prot	c0.13	0.17		0.05	c0.29		c0.07	c0.10		0.04	0.07	
v/s Ratio Perm												
v/c Ratio	0.77	0.39		0.54	0.81		0.83	0.51		0.65	0.40	
Uniform Delay, d1	28.3	13.8		31.0	20.9		32.3	25.9		33.3	26.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	10.8	0.1		3.3	2.8		29.6	1.1		14.0	1.0	
Delay (s)	39.1	13.9		34.3	23.8		61.9	27.0		47.2	27.9	
Level of Service	D	B		C	C		E	C		D	C	
Approach Delay (s)		19.3			24.4			41.0			32.3	
Approach LOS		B			C			D			C	

Intersection Summary				
HCM Average Control Delay	24.9	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.70			
Actuated Cycle Length (s)	71.8	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	68.5%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	155	570	35	67	1141	36	44	26	55	49	60	358
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	1.00		1.00	0.90		1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5041		1770	5062		1770	1673		1770	1624	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	5041		1770	5062		1770	1673		1770	1624	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	172	633	39	74	1268	40	49	29	61	54	67	398
RTOR Reduction (vph)	0	9	0	0	5	0	0	49	0	0	264	0
Lane Group Flow (vph)	172	663	0	74	1303	0	49	41	0	54	201	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	8.1	24.8		3.7	20.4		2.4	11.3		2.4	11.3	
Effective Green, g (s)	8.1	24.8		3.7	20.4		2.4	11.3		2.4	11.3	
Actuated g/C Ratio	0.14	0.43		0.06	0.35		0.04	0.19		0.04	0.19	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	246	2148		113	1774		73	325		73	315	
v/s Ratio Prot	c0.10	0.13		0.04	c0.26		0.03	0.02		c0.03	c0.12	
v/s Ratio Perm												
v/c Ratio	0.70	0.31		0.65	0.73		0.67	0.13		0.74	0.64	
Uniform Delay, d1	23.9	11.0		26.6	16.5		27.5	19.4		27.6	21.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	8.4	0.1		12.8	1.6		21.6	0.2		32.0	4.2	
Delay (s)	32.3	11.1		39.5	18.1		49.1	19.5		59.6	25.8	
Level of Service	C	B		D	B		D	B		E	C	
Approach Delay (s)		15.4			19.3			30.0			29.3	
Approach LOS		B			B			C			C	

Intersection Summary				
HCM Average Control Delay	20.5	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.70			
Actuated Cycle Length (s)	58.2	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	73.3%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	564	126	397	1021	272	342
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.91		1.00	0.91	0.97	1.00
Frt	0.97		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	4946		1770	5085	3433	1583
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	4946		1770	5085	3433	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	627	140	441	1134	302	380
RTOR Reduction (vph)	55	0	0	0	0	304
Lane Group Flow (vph)	712	0	441	1134	302	76
Turn Type			Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases						2
Actuated Green, G (s)	14.3		17.5	35.8	10.9	10.9
Effective Green, g (s)	14.3		17.5	35.8	10.9	10.9
Actuated g/C Ratio	0.26		0.32	0.65	0.20	0.20
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1293		566	3328	684	315
v/s Ratio Prot	c0.14		c0.25	0.22	c0.09	
v/s Ratio Perm						0.05
v/c Ratio	0.55		0.78	0.34	0.44	0.24
Uniform Delay, d1	17.4		16.8	4.2	19.2	18.4
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5		6.7	0.1	0.5	0.4
Delay (s)	17.9		23.6	4.3	19.7	18.8
Level of Service	B		C	A	B	B
Approach Delay (s)	17.9			9.7	19.2	
Approach LOS	B			A	B	

Intersection Summary				
HCM Average Control Delay	13.9	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.62			
Actuated Cycle Length (s)	54.7	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	53.5%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				



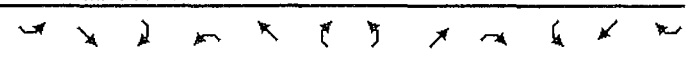
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	16	5	5	97	25	110	99	341	101	165	897	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95			1.00	1.00	0.97	0.91		0.97	0.91	
Frt	1.00	0.94			1.00	0.85	1.00	0.97		1.00	0.99	
Flt Protected	0.95	0.99			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1681	1647			1792	1583	3433	4911		3433	5052	
Flt Permitted	0.95	0.99			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1681	1647			1792	1583	3433	4911		3433	5052	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	18	6	6	108	28	122	110	379	112	183	997	46
RTOR Reduction (vph)	0	6	0	0	0	105	0	50	0	0	4	0
Lane Group Flow (vph)	15	9	0	0	136	17	110	441	0	183	1039	0
Turn Type	Split			Split		Perm	Prot			Prot		
Protected Phases	2	2		6	6		3	8		7	4	
Permitted Phases						6						
Actuated Green, G (s)	2.0	2.0			7.1	7.1	5.3	19.5		6.1	20.3	
Effective Green, g (s)	2.0	2.0			7.1	7.1	5.3	19.5		6.1	20.3	
Actuated g/C Ratio	0.04	0.04			0.14	0.14	0.10	0.38		0.12	0.40	
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	66	65			251	222	359	1889		413	2023	
v/s Ratio Prot	c0.01	0.01			c0.08		0.03	0.09		c0.05	c0.21	
v/s Ratio Perm						0.01						
v/c Ratio	0.23	0.14			0.54	0.08	0.31	0.23		0.44	0.51	
Uniform Delay, d1	23.6	23.5			20.3	19.0	21.0	10.5		20.7	11.5	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.8	1.0			2.4	0.1	0.5	0.1		0.8	0.2	
Delay (s)	25.4	24.5			22.7	19.1	21.5	10.6		21.5	11.7	
Level of Service	C	C			C	B	C	B		C	B	
Approach Delay (s)		24.9			21.0			12.6			13.2	
Approach LOS		C			C			B			B	

Intersection Summary				
HCM Average Control Delay	14.1	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.45			
Actuated Cycle Length (s)	50.7	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	44.9%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	171	85	116	46	195	153	114	441	7	103	459	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.93		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1740		1770	3531		1770	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	1863	1583	1770	1740		1770	3531		1770	3539	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	190	94	129	51	217	170	127	490	8	114	510	189
RTOR Reduction (vph)	0	0	79	0	36	0	0	2	0	0	0	147
Lane Group Flow (vph)	190	94	50	51	351	0	127	496	0	114	510	42
Turn Type	Prot		Perm	Prot			Prot			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									6
Actuated Green, G (s)	12.2	26.7	26.7	3.6	18.1		7.1	16.4		6.1	15.4	15.4
Effective Green, g (s)	12.2	26.7	26.7	3.6	18.1		7.1	16.4		6.1	15.4	15.4
Actuated g/C Ratio	0.18	0.39	0.39	0.05	0.26		0.10	0.24		0.09	0.22	0.22
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	314	723	614	93	458		183	842		157	792	354
v/s Ratio Prot	c0.11	0.05		0.03	c0.20		c0.07	0.14		0.06	c0.14	
v/s Ratio Perm			0.03									0.03
v/c Ratio	0.61	0.13	0.08	0.55	0.77		0.69	0.59		0.73	0.64	0.12
Uniform Delay, d1	26.1	13.6	13.3	31.8	23.4		29.8	23.2		30.5	24.2	21.3
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	3.3	0.1	0.1	6.5	7.5		10.8	1.1		15.4	1.8	0.2
Delay (s)	29.4	13.6	13.4	38.3	30.9		40.6	24.3		45.9	26.0	21.4
Level of Service	C	B	B	D	C		D	C		D	C	C
Approach Delay (s)		20.8			31.8			27.6			27.7	
Approach LOS		C			C			C			C	

Intersection Summary				
HCM Average Control Delay	27.2	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.68			
Actuated Cycle Length (s)	68.8	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	61.4%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	63	70	6	233	52	140	104	318	54	150	560	193
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.91		1.00	0.91	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1840		1770	1863	1583	1770	4974		1770	4890	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1840		1770	1863	1583	1770	4974		1770	4890	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	70	78	7	259	58	156	116	353	60	167	622	214
RTOR Reduction (vph)	0	5	0	0	0	116	0	33	0	0	82	0
Lane Group Flow (vph)	70	80	0	259	58	40	116	380	0	167	754	0
Turn Type	Prot			Prot		Perm	Prot			Prot		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases						2						
Actuated Green, G (s)	3.8	7.1		11.7	15.0	15.0	5.4	14.7		8.3	17.6	
Effective Green, g (s)	3.8	7.1		11.7	15.0	15.0	5.4	14.7		8.3	17.6	
Actuated g/C Ratio	0.07	0.12		0.20	0.26	0.26	0.09	0.25		0.14	0.30	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	116	226		358	483	411	165	1265		254	1489	
v/s Ratio Prot	0.04	c0.04		c0.15	0.03		0.07	0.08		c0.09	c0.15	
v/s Ratio Perm						0.03						
v/c Ratio	0.60	0.35		0.72	0.12	0.10	0.70	0.30		0.66	0.51	
Uniform Delay, d1	26.3	23.2		21.5	16.4	16.3	25.4	17.4		23.4	16.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	8.6	1.0		7.1	0.1	0.1	12.7	0.1		6.0	0.3	
Delay (s)	34.8	24.2		28.6	16.5	16.4	38.2	17.5		29.4	16.8	
Level of Service	C	C		C	B	B	D	B		C	B	
Approach Delay (s)		29.0			23.1			22.1			18.9	
Approach LOS		C			C			C			B	

Intersection Summary				
HCM Average Control Delay	21.3	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.58			
Actuated Cycle Length (s)	57.8	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	50.5%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	312	122	127	62	300	30	277	424	29	68	412	398
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85		0.99		1.00	0.99		1.00	0.93	
Flt Protected	0.95	1.00	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583		1829		1770	3505		1770	3278	
Flt Permitted	0.95	1.00	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1583		1829		1770	3505		1770	3278	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	328	128	134	65	316	32	292	446	31	72	434	419
RTOR Reduction (vph)	0	0	107	0	4	0	0	6	0	0	218	0
Lane Group Flow (vph)	328	128	27	0	409	0	292	471	0	72	635	0
Turn Type	Split		Perm	Split			Prot			Prot		
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	16.2	16.2	16.2		17.0		13.0	24.4		6.7	18.1	
Effective Green, g (s)	16.2	16.2	16.2		17.0		13.0	24.4		6.7	18.1	
Actuated g/C Ratio	0.20	0.20	0.20		0.21		0.16	0.30		0.08	0.23	
Clearance Time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	357	376	319		387		287	1065		148	739	
v/s Ratio Prot	c0.19	0.07			c0.22		c0.17	0.13		0.04	c0.19	
v/s Ratio Perm			0.02									
v/c Ratio	0.92	0.34	0.08		1.06		1.02	0.44		0.49	0.86	
Uniform Delay, d1	31.4	27.5	26.0		31.6		33.6	22.5		35.2	29.9	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	27.7	0.5	0.1		61.6		57.6	0.3		2.5	9.8	
Delay (s)	59.2	28.0	26.1		93.2		91.3	22.8		37.7	39.7	
Level of Service	E	C	C		F		F	C		D	D	
Approach Delay (s)		44.9			93.2			48.8			39.5	
Approach LOS		D			F			D			D	

Intersection Summary				
HCM Average Control Delay	51.6	HCM Level of Service	D	
HCM Volume to Capacity ratio	0.96			
Actuated Cycle Length (s)	80.3	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	91.2%	ICU Level of Service	F	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBR	EBR2	NWL2	NWL	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	31	113	252	97	228	98	218	413	30	76	911	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.97		0.97	0.91		1.00	0.91	
Frt	1.00	0.85	0.85	1.00	0.95		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1583	1583	1770	3334		3433	5034		1770	5003	
Flt Permitted	0.95	1.00	1.00	0.95	0.97		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1583	1583	1770	3334		3433	5034		1770	5003	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	34	126	280	108	253	109	242	459	33	84	1012	122
RTOR Reduction (vph)	0	0	235	0	62	0	0	10	0	0	17	0
Lane Group Flow (vph)	34	126	45	108	300	0	242	482	0	84	1117	0
Turn Type		Perm	Perm	Split			Prot			Prot		
Protected Phases	2			6	6		3	8		7	4	
Permitted Phases		2	2									
Actuated Green, G (s)	10.7	10.7	10.7	9.6	9.6		10.0	24.0		6.6	20.6	
Effective Green, g (s)	10.7	10.7	10.7	9.6	9.6		10.0	24.0		6.6	20.6	
Actuated g/C Ratio	0.16	0.16	0.16	0.14	0.14		0.15	0.36		0.10	0.31	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	283	253	253	254	478		513	1806		175	1541	
v/s Ratio Prot	0.02			0.06	c0.09		c0.07	c0.10		0.05	c0.22	
v/s Ratio Perm		c0.08	0.03									
v/c Ratio	0.12	0.50	0.18	0.43	0.63		0.47	0.27		0.48	0.72	
Uniform Delay, d1	24.1	25.6	24.3	26.1	27.0		26.0	15.2		28.5	20.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	1.5	0.3	1.1	2.6		0.7	0.1		2.1	1.7	
Delay (s)	24.3	27.2	24.6	27.3	29.6		26.7	15.3		30.6	22.3	
Level of Service	C	C	C	C	C		C	B		C	C	
Approach Delay (s)	25.3				29.0			19.1			22.9	
Approach LOS	C				C			B			C	

Intersection Summary				
HCM Average Control Delay	23.3	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.65			
Actuated Cycle Length (s)	66.9	Sum of lost time (s)	20.0	
Intersection Capacity Utilization	52.5%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	48	6	70	13	27	14	124	31	2	3	16	196
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	53	7	78	14	30	16	138	34	2	3	18	218
Direction, Lane #	SE 1	SE 2	NW 1	NE 1	SW 1							
Volume Total (vph)	60	78	60	174	239							
Volume Left (vph)	53	0	14	138	3							
Volume Right (vph)	0	78	16	2	218							
Hadj (s)	0.48	-0.67	-0.07	0.18	-0.51							
Departure Headway (s)	6.0	4.8	5.1	4.9	4.1							
Degree Utilization, x	0.10	0.10	0.08	0.24	0.27							
Capacity (veh/h)	557	684	639	705	825							
Control Delay (s)	8.5	7.2	8.6	9.3	8.7							
Approach Delay (s)	7.8		8.6	9.3	8.7							
Approach LOS	A		A	A	A							

Intersection Summary				
Delay	8.6			
HCM Level of Service	A			
Intersection Capacity Utilization	41.4%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	54	92	119	205	63	25	31	297	83	15	784	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85		0.99		1.00	0.97		1.00	0.98	
Flt Protected		0.98	1.00		0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1829	1583		1779		1770	3423		1770	3457	
Flt Permitted		0.98	1.00		0.97		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1829	1583		1779		1770	3423		1770	3457	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	60	102	132	228	70	28	34	330	92	17	871	160
RTOR Reduction (vph)	0	0	110	0	4	0	0	30	0	0	18	0
Lane Group Flow (vph)	0	162	22	0	322	0	34	392	0	17	1013	0
Turn Type	Split		Prot	Split			Prot			Prot		
Protected Phases	4	4	4	8	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)		11.5	11.5		15.9		1.6	26.2		0.8	25.4	
Effective Green, g (s)		11.5	11.5		15.9		1.6	26.2		0.8	25.4	
Actuated g/C Ratio		0.16	0.16		0.23		0.02	0.37		0.01	0.36	
Clearance Time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		299	259		402		40	1274		20	1247	
v/s Ratio Prot		c0.09	0.01		c0.18		c0.02	0.11		0.01	c0.29	
v/s Ratio Perm												
v/c Ratio		0.54	0.08		0.80		0.85	0.31		0.85	0.81	
Uniform Delay, d1		27.0	25.0		25.8		34.3	15.7		34.7	20.3	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		2.0	0.1		10.9		85.5	0.1		131.5	4.1	
Delay (s)		29.0	25.1		36.7		119.8	15.8		166.2	24.5	
Level of Service		C	C		D		F	B		F	C	
Approach Delay (s)		27.3			36.7			23.6			26.8	
Approach LOS		C			D			C			C	

Intersection Summary				
HCM Average Control Delay	27.7	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.75			
Actuated Cycle Length (s)	70.4	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				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	322	181	405	641	0	0	0	0	1081	3	148
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		0.97	0.95					0.95	0.91	0.95
Frt		0.95		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.95	1.00
Satd. Flow (prot)		3348		3433	3539					1681	1610	1504
Flt Permitted		1.00		0.95	1.00					0.95	0.95	1.00
Satd. Flow (perm)		3348		3433	3539					1681	1610	1504
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	358	201	450	712	0	0	0	0	1201	3	164
RTOR Reduction (vph)	0	106	0	0	0	0	0	0	0	0	1	69
Lane Group Flow (vph)	0	453	0	450	712	0	0	0	0	613	606	79
Turn Type				Prot						Split		Prot
Protected Phases		4		3	8					6	6	6
Permitted Phases												
Actuated Green, G (s)		14.2		11.7	29.9					31.1	31.1	31.1
Effective Green, g (s)		14.2		11.7	29.9					31.1	31.1	31.1
Actuated g/C Ratio		0.21		0.17	0.43					0.45	0.45	0.45
Clearance Time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		689		582	1534					758	726	678
v/s Ratio Prot		c0.14		c0.13	0.20					0.36	c0.38	0.05
v/s Ratio Perm												
v/c Ratio		0.66		0.77	0.46					0.81	0.83	0.12
Uniform Delay, d1		25.2		27.4	13.9					16.4	16.7	11.0
Progression Factor		1.00		1.00	1.00					1.00	1.00	1.00
Incremental Delay, d2		2.3		6.3	0.2					6.4	8.2	0.1
Delay (s)		27.4		33.7	14.1					22.7	24.9	11.1
Level of Service		C		C	B					C	C	B
Approach Delay (s)		27.4			21.7			0.0			22.4	
Approach LOS		C			C			A			C	

Intersection Summary				
HCM Average Control Delay	23.1	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.78			
Actuated Cycle Length (s)	69.0	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	115.0%	ICU Level of Service	H	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	63	1268	0	0	974	879	109	2	570	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	0.97	0.95			0.95	1.00	0.95	0.91	0.95			
Frt	1.00	1.00			1.00	0.85	1.00	0.86	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (prot)	3433	3539			3539	1583	1681	1449	1504			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (perm)	3433	3539			3539	1583	1681	1449	1504			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	70	1409	0	0	1082	977	121	2	633	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	493	0	29	29	0	0	0
Lane Group Flow (vph)	70	1409	0	0	1082	484	109	295	294	0	0	0
Turn Type	Prot					Prot	Split		Prot			
Protected Phases	7	4			8	8	2	2	2			
Permitted Phases												
Actuated Green, G (s)	2.4	32.2			25.8	25.8	14.9	14.9	14.9			
Effective Green, g (s)	2.4	32.2			25.8	25.8	14.9	14.9	14.9			
Actuated g/C Ratio	0.04	0.58			0.47	0.47	0.27	0.27	0.27			
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0			
Lane Grp Cap (vph)	150	2068			1657	741	455	392	407			
v/s Ratio Prot	0.02	c0.40			0.31	0.31	0.06	c0.20	0.20			
v/s Ratio Perm												
v/c Ratio	0.47	0.68			0.65	0.65	0.24	0.75	0.72			
Uniform Delay, d1	25.7	7.9			11.2	11.2	15.7	18.4	18.2			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	2.3	0.9			0.9	2.1	0.3	7.9	6.2			
Delay (s)	28.0	8.8			12.2	13.3	16.0	26.3	24.4			
Level of Service	C	A			B	B	B	C	C			
Approach Delay (s)		9.8			12.7			24.0			0.0	
Approach LOS		A			B			C			A	

Intersection Summary				
HCM Average Control Delay	13.7	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.70			
Actuated Cycle Length (s)	55.1	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	115.0%	ICU Level of Service	H	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	36	13	44	725	19	162	90	1028	149	119	1110	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.0		4.0	4.0	
Lane Util. Factor	0.95	0.91	0.95	0.95	0.91	0.95	1.00	0.91		1.00	0.91	
Frt	1.00	0.93	0.85	1.00	0.99	0.85	1.00	0.98		1.00	1.00	
Flt Protected	0.95	0.99	1.00	0.95	0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1681	1563	1504	1681	1611	1504	1770	4988		1770	5067	
Flt Permitted	0.95	0.99	1.00	0.95	0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1681	1563	1504	1681	1611	1504	1770	4988		1770	5067	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	40	14	49	806	21	180	100	1142	166	132	1233	31
RTOR Reduction (vph)	0	16	30	0	1	111	0	19	0	0	3	0
Lane Group Flow (vph)	36	19	2	419	425	51	100	1289	0	132	1261	0
Turn Type	Split		Prot	Split		Prot	Prot			Prot		
Protected Phases	4	4	4	8	8	8	5	2!		6!		
Permitted Phases											6	
Actuated Green, G (s)	5.8	5.8	5.8	24.6	24.6	24.6	6.5	34.2		24.7	24.7	
Effective Green, g (s)	5.8	5.8	5.8	24.6	24.6	24.6	6.5	34.2		24.7	24.7	
Actuated g/C Ratio	0.07	0.07	0.07	0.32	0.32	0.32	0.08	0.44		0.32	0.32	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	126	117	112	533	511	477	148	2198		563	1613	
v/s Ratio Prot	c0.02	0.01	0.00	0.25	c0.26	0.03	0.06	c0.26		0.07		
v/s Ratio Perm											c0.25	
v/c Ratio	0.29	0.16	0.02	0.79	0.83	0.11	0.68	0.59		0.23	0.78	
Uniform Delay, d1	33.9	33.6	33.3	24.1	24.6	18.7	34.5	16.4		19.5	24.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.3	0.7	0.1	7.5	11.0	0.1	11.6	0.4		0.2	2.5	
Delay (s)	35.2	34.3	33.3	31.6	35.6	18.8	46.1	16.8		19.7	26.5	
Level of Service	D	C	C	C	D	B	D	B		B	C	
Approach Delay (s)		34.3			31.2			18.9			25.9	
Approach LOS		C			C			B			C	

Intersection Summary				
HCM Average Control Delay	25.0	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.76			
Actuated Cycle Length (s)	77.6	Sum of lost time (s)	17.0	
Intersection Capacity Utilization	69.5%	ICU Level of Service	C	
Analysis Period (min)	15			

! Phase conflict between lane groups.
c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	349	1043	261	165	914	0	0	620	674
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0	4.0	4.0	4.0	4.0			4.0	4.0
Lane Util. Factor				0.97	0.91	1.00	0.97	0.95			0.86	0.86
Frpb, ped/bikes				1.00	1.00	1.00	1.00	1.00			0.93	0.79
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00			1.00	1.00
Frt				1.00	1.00	0.85	1.00	1.00			0.95	0.85
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				3433	5085	1583	3433	3539			4212	1073
Flt Permitted				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)				3433	5085	1583	3433	3539			4212	1073
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	388	1159	290	183	1016	0	0	689	749
RTOR Reduction (vph)	0	0	0	0	0	66	0	0	0	0	10	10
Lane Group Flow (vph)	0	0	0	388	1159	224	183	1016	0	0	1054	364
Confl. Peds. (#/hr)												200
Turn Type				Prot		Perm	Prot					Perm
Protected Phases				3	8		5	2			6	
Permitted Phases						8						6
Actuated Green, G (s)				16.6	16.6	16.6	4.6	29.8			21.2	21.2
Effective Green, g (s)				16.6	16.6	16.6	4.6	29.8			21.2	21.2
Actuated g/C Ratio				0.31	0.31	0.31	0.08	0.55			0.39	0.39
Clearance Time (s)				4.0	4.0	4.0	4.0	4.0			4.0	4.0
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)				1048	1552	483	290	1939			1641	418
v/s Ratio Prot				0.11	c0.23		0.05	c0.29			0.25	
v/s Ratio Perm						0.14						c0.34
v/c Ratio				0.37	0.75	0.46	0.63	0.52			0.64	0.87
Uniform Delay, d1				14.8	17.0	15.3	24.1	7.8			13.5	15.3
Progression Factor				1.00	1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2				0.2	2.0	0.7	4.4	0.3			0.9	17.3
Delay (s)				15.0	19.0	16.0	28.5	8.1			14.4	32.6
Level of Service				B	B	B	C	A			B	C
Approach Delay (s)		0.0			17.7			11.2			19.1	
Approach LOS		A			B			B			B	

Intersection Summary				
HCM Average Control Delay	16.4	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.80			
Actuated Cycle Length (s)	54.4	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	101.9%	ICU Level of Service	G	
Analysis Period (min)	15			

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	651	943	317	0	0	0	0	407	227	147	748	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Lane Util. Factor	0.91	0.86	0.91					0.86		1.00	0.91	
Frt	1.00	1.00	0.85					0.95		1.00	1.00	
Flt Protected	0.95	0.99	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	1610	3172	1441					6064		1770	5085	
Flt Permitted	0.95	0.99	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	1610	3172	1441					6064		1770	5085	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	723	1048	352	0	0	0	0	452	252	163	831	0
RTOR Reduction (vph)	0	3	50	0	0	0	0	59	0	0	0	0
Lane Group Flow (vph)	586	1217	267	0	0	0	0	645	0	163	831	0
Turn Type	Split		Perm							Prot		
Protected Phases	4	4						2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	28.1	28.1	28.1					13.1		7.9	25.0	
Effective Green, g (s)	28.1	28.1	28.1					13.1		7.9	25.0	
Actuated g/C Ratio	0.46	0.46	0.46					0.21		0.13	0.41	
Clearance Time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	740	1459	663					1300		229	2081	
v/s Ratio Prot	0.36	c0.38						c0.11		c0.09	0.16	
v/s Ratio Perm			0.19									
v/c Ratio	0.79	0.83	0.40					0.50		0.71	0.40	
Uniform Delay, d1	14.0	14.5	10.9					21.1		25.5	12.7	
Progression Factor	1.00	1.00	1.00					1.00		1.00	1.00	
Incremental Delay, d2	5.8	4.3	0.4					0.3		10.0	0.1	
Delay (s)	19.8	18.7	11.3					21.4		35.5	12.9	
Level of Service	B	B	B					C		D	B	
Approach Delay (s)		17.9			0.0			21.4			16.6	
Approach LOS		B			A			C			B	

Intersection Summary				
HCM Average Control Delay	18.2	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.72			
Actuated Cycle Length (s)	61.1	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	101.9%	ICU Level of Service	G	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Volume (vph)	16	215	0	439	25	97	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		0.95		1.00	1.00
Frt	1.00	1.00		0.99		1.00	0.85
Flt Protected	0.95	1.00		1.00		0.95	1.00
Satd. Flow (prot)	1770	3539		3510		1770	1583
Flt Permitted	0.95	1.00		1.00		0.95	1.00
Satd. Flow (perm)	1770	3539		3510		1770	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	18	239	0	488	28	108	128
RTOR Reduction (vph)	0	0	0	8	0	0	100
Lane Group Flow (vph)	18	239	0	508	0	108	28
Turn Type	Prot		Prot				Perm
Protected Phases	7	4	3	8		6	
Permitted Phases							6
Actuated Green, G (s)	0.5	12.0		7.5		5.6	5.6
Effective Green, g (s)	0.5	12.0		7.5		5.6	5.6
Actuated g/C Ratio	0.02	0.47		0.29		0.22	0.22
Clearance Time (s)	4.0	4.0		4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0		3.0	3.0
Lane Grp Cap (vph)	35	1659		1028		387	346
v/s Ratio Prot	0.01	c0.07		c0.14		c0.06	
v/s Ratio Perm							0.02
v/c Ratio	0.51	0.14		0.49		0.28	0.08
Uniform Delay, d1	12.4	3.9		7.5		8.3	8.0
Progression Factor	1.00	1.00		1.00		1.00	1.00
Incremental Delay, d2	12.2	0.0		0.4		0.4	0.1
Delay (s)	24.6	3.9		7.9		8.7	8.1
Level of Service	C	A		A		A	A
Approach Delay (s)		5.4		7.9		8.4	
Approach LOS		A		A		A	

Intersection Summary			
HCM Average Control Delay	7.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	25.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	26.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	EBR2	WBL	WBT	WBR	NBL	NBT	NBR2	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	75	220	179	275	373	100	342	344	287	1102	224	206
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.88	1.00	1.00	1.00		1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.85	0.85	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	2787	1583	1770	1804		1770	3539	1583	3433	3539	1583
Flt Permitted	0.46	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	864	2787	1583	1770	1804		1770	3539	1583	3433	3539	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	83	244	199	306	414	111	380	382	319	1224	249	229
RTOR Reduction (vph)	0	0	170	0	10	0	0	0	269	0	0	173
Lane Group Flow (vph)	83	244	29	306	515	0	380	382	50	1224	249	56
Turn Type	custom	custom	custom	Prot			Prot		Perm	Prot		Perm
Protected Phases				3	8		5	2		1	6	
Permitted Phases	4	4	4						2			6
Actuated Green, G (s)	13.8	13.8	13.8	17.0	34.8		25.5	15.0	15.0	34.1	23.6	23.6
Effective Green, g (s)	13.8	13.8	13.8	17.0	34.8		25.5	15.0	15.0	34.1	23.6	23.6
Actuated g/C Ratio	0.14	0.14	0.14	0.18	0.36		0.27	0.16	0.16	0.36	0.25	0.25
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	124	401	228	314	655		471	554	248	1221	871	390
v/s Ratio Prot				c0.17	c0.29		0.21	c0.11		c0.36	0.07	
v/s Ratio Perm	0.10	0.09	0.02						0.03			0.04
v/c Ratio	0.67	0.61	0.13	0.97	0.79		0.81	0.69	0.20	1.00	0.29	0.14
Uniform Delay, d1	38.9	38.5	35.8	39.2	27.2		32.9	38.2	35.2	30.9	29.3	28.3
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	12.9	2.6	0.2	43.5	6.2		9.8	3.6	0.4	26.3	0.2	0.2
Delay (s)	51.8	41.1	36.0	82.8	33.5		42.7	41.8	35.6	57.2	29.5	28.4
Level of Service	D	D	D	F	C		D	D	D	E	C	C
Approach Delay (s)					51.6			40.3			49.3	
Approach LOS					D			D			D	

Intersection Summary				
HCM Average Control Delay	46.3	HCM Level of Service	D	
HCM Volume to Capacity ratio	0.88			
Actuated Cycle Length (s)	95.9	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	84.1%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	450	0	330	0	0	0	0	528	129	188	459	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95	1.00					0.95		0.97	0.95	
Frt	1.00	1.00	0.85					0.97		1.00	1.00	
Flt Protected	0.95	0.95	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	1681	1681	1583					3435		3433	3539	
Flt Permitted	0.95	0.95	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	1681	1681	1583					3435		3433	3539	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	500	0	367	0	0	0	0	587	143	209	510	0
RTOR Reduction (vph)	0	0	207	0	0	0	0	43	0	0	0	0
Lane Group Flow (vph)	250	250	160	0	0	0	0	687	0	209	510	0
Turn Type	Split		Perm							Prot		
Protected Phases	4	4						2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	13.1	13.1	13.1					14.2		3.6	21.8	
Effective Green, g (s)	13.1	13.1	13.1					14.2		3.6	21.8	
Actuated g/C Ratio	0.31	0.31	0.31					0.33		0.08	0.51	
Clearance Time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	513	513	483					1137		288	1798	
v/s Ratio Prot	c0.15	0.15						c0.20		c0.06	0.14	
v/s Ratio Perm			0.10									
v/c Ratio	0.49	0.49	0.33					0.60		0.73	0.28	
Uniform Delay, d1	12.2	12.2	11.5					12.0		19.2	6.1	
Progression Factor	1.00	1.00	1.00					1.00		1.00	1.00	
Incremental Delay, d2	0.7	0.7	0.4					0.9		8.8	0.1	
Delay (s)	12.9	12.9	11.9					12.9		27.9	6.1	
Level of Service	B	B	B					B		C	A	
Approach Delay (s)		12.5			0.0			12.9			12.5	
Approach LOS		B			A			B			B	

Intersection Summary				
HCM Average Control Delay	12.6	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.57			
Actuated Cycle Length (s)	42.9	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	46.5%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	89	507	36	145	468	345	57	66	243	642	143	183
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		4.0	5.0		4.0	5.0		4.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		0.97	1.00	
Frt	1.00	0.99		1.00	0.94		1.00	0.88		1.00	0.92	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3504		1770	3314		1770	1643		3433	1706	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3504		1770	3314		1770	1643		3433	1706	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	99	563	40	161	520	383	63	73	270	713	159	203
RTOR Reduction (vph)	0	7	0	0	167	0	0	139	0	0	55	0
Lane Group Flow (vph)	99	596	0	161	736	0	63	204	0	713	307	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												
Actuated Green, G (s)	5.0	17.8		9.0	20.8		4.0	14.4		17.6	28.0	
Effective Green, g (s)	5.0	17.8		9.0	20.8		4.0	14.4		17.6	28.0	
Actuated g/C Ratio	0.07	0.23		0.12	0.27		0.05	0.19		0.23	0.36	
Clearance Time (s)	5.0	5.0		4.0	5.0		4.0	5.0		4.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	115	812		207	898		92	308		787	622	
v/s Ratio Prot	0.06	0.17		c0.09	c0.22		0.04	c0.12		c0.21	0.18	
v/s Ratio Perm												
v/c Ratio	0.86	0.73		0.78	0.82		0.68	0.66		0.91	0.49	
Uniform Delay, d1	35.6	27.3		32.9	26.2		35.8	28.9		28.8	18.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	44.1	3.5		16.6	5.9		19.0	5.3		13.9	0.6	
Delay (s)	79.7	30.8		49.6	32.2		54.8	34.2		42.7	19.5	
Level of Service	E	C		D	C		D	C		D	B	
Approach Delay (s)		37.7			34.8			37.4			34.9	
Approach LOS		D			C			D			C	

Intersection Summary				
HCM Average Control Delay	35.8	HCM Level of Service		D
HCM Volume to Capacity ratio	0.82			
Actuated Cycle Length (s)	76.8	Sum of lost time (s)		18.0
Intersection Capacity Utilization	81.5%	ICU Level of Service		D
Analysis Period (min)	15			
c Critical Lane Group				

Movement	WBL	WBR	SEL	SET	NWT	NWR	NWR2	SWL	SWR
Lane Configurations									
Volume (vph)	0	0	777	597	764	0	315	137	231
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0	5.0	4.0		4.0	4.0	4.0
Lane Util. Factor			0.97	0.95	0.95		1.00	0.97	1.00
Frt			1.00	1.00	1.00		0.85	1.00	0.85
Flt Protected			0.95	1.00	1.00		1.00	0.95	1.00
Satd. Flow (prot)			3433	3539	3539		1583	3433	1583
Flt Permitted			0.95	1.00	1.00		1.00	0.95	1.00
Satd. Flow (perm)			3433	3539	3539		1583	3433	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	863	663	849	0	350	152	257
RTOR Reduction (vph)	0	0	0	0	0	0	237	0	219
Lane Group Flow (vph)	0	0	863	663	849	0	113	152	38
Turn Type			Prot				Perm		Perm
Protected Phases			5	2	6			4	
Permitted Phases							6		4
Actuated Green, G (s)			17.4	38.3	17.9		17.9	8.2	8.2
Effective Green, g (s)			17.4	38.3	17.9		17.9	8.2	8.2
Actuated g/C Ratio			0.31	0.69	0.32		0.32	0.15	0.15
Clearance Time (s)			4.0	5.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)			3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)			1076	2442	1141		511	507	234
v/s Ratio Prot			c0.25	0.19	c0.24			c0.04	
v/s Ratio Perm							0.07		0.02
v/c Ratio			0.80	0.27	0.74		0.22	0.30	0.16
Uniform Delay, d1			17.5	3.3	16.8		13.7	21.1	20.7
Progression Factor			1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2			4.4	0.1	2.7		0.2	0.3	0.3
Delay (s)			21.9	3.3	19.4		13.9	21.4	21.0
Level of Service			C	A	B		B	C	C
Approach Delay (s)	0.0			13.8	17.8			21.1	
Approach LOS	A			B	B			C	

Intersection Summary				
HCM Average Control Delay	16.3	HCM Level of Service		B
HCM Volume to Capacity ratio	0.68			
Actuated Cycle Length (s)	55.5	Sum of lost time (s)		12.0
Intersection Capacity Utilization	57.2%	ICU Level of Service		B
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL2	EBL	EBR	SEL	SET	SER	NWL	NWT	NWR	SWL	SWR
Lane Configurations											
Volume (vph)	309	0	166	350	381	0	0	745	220	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		
Lane Util. Factor	0.95	0.95	1.00	0.97	0.95			0.95	1.00		
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		
Flt Protected	0.95	0.95	1.00	0.95	1.00			1.00	1.00		
Satd. Flow (prot)	1681	1681	1583	3433	3539			3539	1583		
Flt Permitted	0.95	0.95	1.00	0.95	1.00			1.00	1.00		
Satd. Flow (perm)	1681	1681	1583	3433	3539			3539	1583		
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	343	0	184	389	423	0	0	828	244	0	0
RTOR Reduction (vph)	0	0	145	0	0	0	0	0	158	0	0
Lane Group Flow (vph)	171	172	39	389	423	0	0	828	86	0	0
Turn Type	Split		Perm	Prot					Perm		
Protected Phases	4	4		1	6			2			
Permitted Phases			4						2		
Actuated Green, G (s)	10.8	10.8	10.8	10.1	32.1			18.0	18.0		
Effective Green, g (s)	10.8	10.8	10.8	10.1	32.1			18.0	18.0		
Actuated g/C Ratio	0.21	0.21	0.21	0.20	0.63			0.35	0.35		
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0		
Lane Grp Cap (vph)	357	357	336	681	2232			1252	560		
v/s Ratio Prot	0.10	c0.10		c0.11	0.12			c0.23			
v/s Ratio Perm			0.02						0.05		
v/c Ratio	0.48	0.48	0.12	0.57	0.19			0.66	0.15		
Uniform Delay, d1	17.6	17.6	16.2	18.4	3.9			13.9	11.2		
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00	1.00		
Incremental Delay, d2	1.0	1.0	0.2	1.2	0.0			1.3	0.1		
Delay (s)	18.6	18.6	16.3	19.6	4.0			15.2	11.4		
Level of Service	B	B	B	B	A			B	B		
Approach Delay (s)		17.8			11.5			14.3		0.0	
Approach LOS		B			B			B		A	

Intersection Summary			
HCM Average Control Delay	14.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	50.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	49.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

ALL-WAY STOP CONTROL ANALYSIS

General Information		Site Information	
Analyst	Jacob Swim	Intersection	Carmel Creek Rd./Del Mar Trail
Agency/Co.	USAI	Jurisdiction	City of San Diego
Date Performed	3/25/2011	Analysis Year	2011
Analysis Time Period	36 NT+P AM (Phase 1)		

Project ID 002407 - San Diego Corporate Center Lots

East/West Street: Del Mar Trail North/South Street: Carmel Creek Road

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	10	10	10	206	2	26
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	3	269	103	15	957	3
%Thrus Left Lane	50			50		

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		LTR		LT	TR	LT	TR
PHF	0.90		0.90		0.90	0.90	0.90	0.90
Flow Rate (veh/h)	33		258		151	264	547	535
% Heavy Vehicles	2		2		2	2	2	2
No. Lanes	1		1		2		2	
Geometry Group	2		2		5		5	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.3		0.9		0.0	0.0	0.0	0.0
Prop. Right-Turns	0.3		0.1		0.0	0.4	0.0	0.0
Prop. Heavy Vehicle	0.0		0.0		0.0	0.0	0.0	0.0
hLT-adj	0.2	0.2	0.2	0.2	0.5	0.5	0.5	0.5
hRT-adj	-0.6	-0.6	-0.6	-0.6	-0.7	-0.7	-0.7	-0.7
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	-0.1		0.1		0.0	-0.3	0.0	0.0

Departure Headway and Service Time

hd, initial value (s)	3.20		3.20		3.20	3.20	3.20	3.20
x, initial	0.03		0.23		0.13	0.23	0.49	0.48
hd, final value (s)	7.49		6.83		7.16	6.84	6.34	6.32
x, final value	0.07		0.49		0.30	0.50	0.96	0.94
Move-up time, m (s)	2.0		2.0		2.3		2.3	
Service Time, t_s (s)	5.5		4.8		4.9	4.5	4.0	4.0

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	283		508		401	514	568	570
Delay (s/veh)	11.04		16.19		12.90	16.22	53.69	48.69
LOS	B		C		B	C	F	E
Approach: Delay (s/veh)	11.04		16.19		15.01		51.22	
LOS	B		C		C		F	
Intersection Delay (s/veh)	37.02							
Intersection LOS	E							

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	6	478	531	176	425	3	559	2	431	0	2	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.95	1.00		1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1861			1774	1583		1779	
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.95	1.00		1.00	
Satd. Flow (perm)	1770	1863	1583	1770	1861			1774	1583		1779	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	6	503	559	185	447	3	588	2	454	0	2	1
RTOR Reduction (vph)	0	0	212	0	0	0	0	0	284	0	1	0
Lane Group Flow (vph)	6	503	347	185	450	0	0	590	170	0	2	0
Turn Type	Prot		Perm	Prot			Split		Perm	Split		
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4						2			
Actuated Green, G (s)	0.8	36.3	36.3	13.0	48.5			39.9	39.9		1.1	
Effective Green, g (s)	0.8	36.3	36.3	13.0	48.5			39.9	39.9		1.1	
Actuated g/C Ratio	0.01	0.34	0.34	0.12	0.46			0.38	0.38		0.01	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	13	636	541	216	849			666	594		18	
v/s Ratio Prot	0.00	c0.27		c0.10	0.24			c0.33			c0.00	
v/s Ratio Perm			0.22						0.11			
v/c Ratio	0.46	0.79	0.64	0.86	0.53			0.89	0.29		0.11	
Uniform Delay, d1	52.5	31.6	29.5	45.7	20.7			31.1	23.2		52.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	23.8	6.7	2.6	26.7	0.6			13.4	0.3		2.7	
Delay (s)	76.3	38.2	32.1	72.5	21.4			44.5	23.5		54.9	
Level of Service	E	D	C	E	C			D	C		D	
Approach Delay (s)		35.2			36.3			35.4			54.9	
Approach LOS		D			D			D			D	

Intersection Summary				
HCM Average Control Delay	35.5	HCM Level of Service	D	
HCM Volume to Capacity ratio	0.83			
Actuated Cycle Length (s)	106.3	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	82.6%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Volume (vph)	211	264	0	567	375	342	293
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		5.0	5.0	4.0	4.0
Lane Util. Factor	0.97	1.00		1.00	1.00	1.00	0.95
Frt	1.00	0.85		1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00		1.00	1.00	0.95	1.00
Satd. Flow (prot)	3433	1583		1863	1583	1770	3539
Flt Permitted	0.95	1.00		1.00	1.00	0.95	1.00
Satd. Flow (perm)	3433	1583		1863	1583	1770	3539
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	234	293	0	630	417	380	326
RTOR Reduction (vph)	0	244	0	0	253	0	0
Lane Group Flow (vph)	234	49	0	630	164	380	326
Turn Type		Perm	Prot		Perm	Prot	
Protected Phases	1		3	8		7	
Permitted Phases		1			8		6
Actuated Green, G (s)	12.2	12.2		28.4	28.4	18.7	12.2
Effective Green, g (s)	12.2	12.2		28.4	28.4	18.7	12.2
Actuated g/C Ratio	0.17	0.17		0.39	0.39	0.26	0.17
Clearance Time (s)	4.0	4.0		5.0	5.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	579	267		732	622	458	597
v/s Ratio Prot	0.07			c0.34		c0.21	
v/s Ratio Perm		0.03			0.10		c0.09
v/c Ratio	0.40	0.19		0.86	0.26	0.83	0.55
Uniform Delay, d1	26.8	25.8		20.1	14.9	25.3	27.5
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5	0.3		10.1	0.2	11.8	1.0
Delay (s)	27.3	26.1		30.3	15.1	37.1	28.5
Level of Service	C	C		C	B	D	C
Approach Delay (s)	26.6			24.2			33.2
Approach LOS	C			C			C

Intersection Summary				
HCM Average Control Delay	27.5	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.79			
Actuated Cycle Length (s)	72.3	Sum of lost time (s)	13.0	
Intersection Capacity Utilization	65.6%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Volume (vph)	65	6	0	901	111	8	502
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0		4.0	4.0
Lane Util. Factor	0.97			0.95		1.00	0.95
Frt	0.99			0.98		1.00	1.00
Flt Protected	0.96			1.00		0.95	1.00
Satd. Flow (prot)	3410			3481		1770	3539
Flt Permitted	0.96			1.00		0.95	1.00
Satd. Flow (perm)	3410			3481		1770	3539
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	72	7	0	1001	123	9	558
RTOR Reduction (vph)	6	0	0	12	0	0	0
Lane Group Flow (vph)	73	0	0	1112	0	9	558
Turn Type			Prot			Prot	
Protected Phases	8		5	2		1	6
Permitted Phases							
Actuated Green, G (s)	3.2			19.6		0.6	24.2
Effective Green, g (s)	3.2			19.6		0.6	24.2
Actuated g/C Ratio	0.09			0.55		0.02	0.68
Clearance Time (s)	4.0			4.0		4.0	4.0
Vehicle Extension (s)	3.0			3.0		3.0	3.0
Lane Grp Cap (vph)	308			1927		30	2419
v/s Ratio Prot	c0.02			c0.32		0.01	c0.16
v/s Ratio Perm							
v/c Ratio	0.24			0.58		0.30	0.23
Uniform Delay, d1	15.0			5.2		17.2	2.1
Progression Factor	1.00			1.00		1.00	1.00
Incremental Delay, d2	0.4			0.4		5.6	0.0
Delay (s)	15.4			5.6		22.8	2.2
Level of Service	B			A		C	A
Approach Delay (s)	15.4			5.6			2.5
Approach LOS	B			A			A

Intersection Summary			
HCM Average Control Delay	5.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	35.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	38.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	22	14	18	21	155	26	817	59	89	446	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.94		1.00	0.87		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1751		1770	1616		1770	3503		1770	3508	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1751		1770	1616		1770	3503		1770	3508	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	26	24	16	20	23	172	29	908	66	99	496	31
RTOR Reduction (vph)	0	14	0	0	152	0	0	7	0	0	5	0
Lane Group Flow (vph)	26	26	0	20	43	0	29	967	0	99	522	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	1.6	6.8		0.8	6.0		1.4	23.5		5.0	27.1	
Effective Green, g (s)	1.6	6.8		0.8	6.0		1.4	23.5		5.0	27.1	
Actuated g/C Ratio	0.03	0.13		0.02	0.12		0.03	0.45		0.10	0.52	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	54	229		27	186		48	1580		170	1825	
v/s Ratio Prot	c0.01	0.01		0.01	c0.03		0.02	c0.28		c0.06	c0.15	
v/s Ratio Perm												
v/c Ratio	0.48	0.11		0.74	0.23		0.60	0.61		0.58	0.29	
Uniform Delay, d1	24.8	20.0		25.5	21.0		25.1	10.8		22.6	7.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	6.6	0.2		70.7	0.6		19.6	0.7		5.0	0.1	
Delay (s)	31.5	20.2		96.2	21.6		44.7	11.6		27.6	7.1	
Level of Service	C	C		F	C		D	B		C	A	
Approach Delay (s)		24.6			28.5			12.5			10.4	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM Average Control Delay	14.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	52.1	Sum of lost time (s)	20.0
Intersection Capacity Utilization	56.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	7	42	33	45	30	20	48	964	127	23	472	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.94		1.00	0.98		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1751		1770	3477		1770	3528	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1583	1770	1751		1770	3477		1770	3528	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	8	47	37	50	33	22	53	1071	141	26	524	11
RTOR Reduction (vph)	0	0	34	0	20	0	0	12	0	0	2	0
Lane Group Flow (vph)	8	47	3	50	35	0	53	1200	0	26	533	0
Turn Type	Prot		Perm	Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	0.8	4.4	4.4	1.7	5.3		1.8	24.5		0.6	23.3	
Effective Green, g (s)	0.8	4.4	4.4	1.7	5.3		1.8	24.5		0.6	23.3	
Actuated g/C Ratio	0.02	0.09	0.09	0.04	0.11		0.04	0.52		0.01	0.49	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	30	174	148	64	197		68	1805		23	1742	
v/s Ratio Prot	0.00	c0.03		c0.03	0.02		c0.03	c0.35		0.01	0.15	
v/s Ratio Perm			0.00									
v/c Ratio	0.27	0.27	0.02	0.78	0.18		0.78	0.67		1.13	0.31	
Uniform Delay, d1	22.9	19.9	19.4	22.6	19.0		22.5	8.3		23.3	7.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.7	0.8	0.1	45.0	0.4		41.9	0.9		231.0	0.1	
Delay (s)	27.6	20.7	19.5	67.5	19.4		64.4	9.3		254.3	7.2	
Level of Service	C	C	B	E	B		E	A		F	A	
Approach Delay (s)		20.8			42.3			11.6			18.7	
Approach LOS		C			D			B			B	

Intersection Summary				
HCM Average Control Delay	15.6	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.57			
Actuated Cycle Length (s)	47.2	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	53.2%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	128	855	16	143	930	213	41	32	54	396	36	134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.95			1.00	1.00	0.95	0.95	
Frt	1.00	1.00		1.00	0.97			1.00	0.85	1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00	0.95	0.98	
Satd. Flow (prot)	1770	5071		1770	3440			1812	1583	1681	1610	
Flt Permitted	0.95	1.00		0.95	1.00			0.97	1.00	0.95	0.98	
Satd. Flow (perm)	1770	5071		1770	3440			1812	1583	1681	1610	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	142	950	18	159	1033	237	46	36	60	440	40	149
RTOR Reduction (vph)	0	2	0	0	21	0	0	0	54	0	37	0
Lane Group Flow (vph)	142	966	0	159	1249	0	0	82	6	321	271	0
Turn Type	Prot			Prot			Split		Prot	Split		
Protected Phases	7	4		3	8		2	2	2	6	6	
Permitted Phases												
Actuated Green, G (s)	8.2	27.7		12.0	31.5			7.6	7.6	17.7	17.7	
Effective Green, g (s)	8.2	27.7		12.0	31.5			7.6	7.6	17.7	17.7	
Actuated g/C Ratio	0.10	0.34		0.15	0.39			0.09	0.09	0.22	0.22	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	179	1734		262	1338			170	149	367	352	
v/s Ratio Prot	c0.08	0.19		0.09	c0.36			c0.05	0.00	c0.19	0.17	
v/s Ratio Perm												
v/c Ratio	0.79	0.56		0.61	0.93			0.48	0.04	0.87	0.77	
Uniform Delay, d1	35.6	21.7		32.3	23.7			34.8	33.4	30.6	29.7	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2	21.0	0.4		3.9	12.0			2.2	0.1	20.0	10.0	
Delay (s)	56.5	22.1		36.2	35.7			37.0	33.5	50.6	39.7	
Level of Service	E	C		D	D			D	C	D	D	
Approach Delay (s)		26.5			35.8			35.5			45.3	
Approach LOS		C			D			D			D	

Intersection Summary				
HCM Average Control Delay	34.5	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.85			
Actuated Cycle Length (s)	81.0	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	72.9%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑			↑↑		↱
Volume (veh/h)	1258	64	0	1548	0	91
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	1398	71	0	1720	0	101
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	575			607		
pX, platoon unblocked			0.87		0.87	0.87
vC, conflicting volume			1469		2293	501
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			998		1950	0
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	89
cM capacity (veh/h)			597		49	938

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1
Volume Total	559	559	351	860	860	101
Volume Left	0	0	0	0	0	0
Volume Right	0	0	71	0	0	101
cSH	1700	1700	1700	1700	1700	938
Volume to Capacity	0.33	0.33	0.21	0.51	0.51	0.11
Queue Length 95th (ft)	0	0	0	0	0	9
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	9.3
Lane LOS						A
Approach Delay (s)	0.0			0.0		9.3
Approach LOS						A

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	46.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↰↑↑	↱
Volume (vph)	0	964	1319	0	941	299
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		0.97	0.91
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3539	3539		3431	1441
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3539	3539		3431	1441
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	1071	1466	0	1046	332
RTOR Reduction (vph)	0	0	0	0	4	10
Lane Group Flow (vph)	0	1071	1466	0	1075	289
Turn Type						Prot
Protected Phases		4	8		6	6
Permitted Phases						
Actuated Green, G (s)		25.5	25.5		20.1	20.1
Effective Green, g (s)		25.5	25.5		20.1	20.1
Actuated g/C Ratio		0.48	0.48		0.38	0.38
Clearance Time (s)		4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1684	1684		1287	540
v/s Ratio Prot		0.30	c0.41		c0.31	0.20
v/s Ratio Perm						
v/c Ratio		0.64	0.87		0.83	0.54
Uniform Delay, d1		10.6	12.6		15.2	13.1
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		0.8	5.2		4.8	1.0
Delay (s)		11.4	17.8		20.1	14.1
Level of Service		B	B		C	B
Approach Delay (s)		11.4	17.8		18.8	
Approach LOS		B	B		B	

Intersection Summary			
HCM Average Control Delay	16.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	53.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	116.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	242	1608	0	0	1492	981	649	24	883	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	0.97	0.95			0.91	1.00	0.95	0.91	0.95			
Frt	1.00	1.00			1.00	0.85	1.00	0.89	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99	1.00			
Satd. Flow (prot)	3433	3539			5085	1583	1681	1491	1504			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99	1.00			
Satd. Flow (perm)	3433	3539			5085	1583	1681	1491	1504			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	269	1787	0	0	1658	1090	721	27	981	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	511	0	6	6	0	0	0
Lane Group Flow (vph)	269	1787	0	0	1658	579	598	566	553	0	0	0
Turn Type	Prot					Prot	Split		Prot			
Protected Phases	7	4			8	8	2	2	2			
Permitted Phases												
Actuated Green, G (s)	7.0	41.0			30.0	30.0	31.0	31.0	31.0			
Effective Green, g (s)	7.0	41.0			30.0	30.0	31.0	31.0	31.0			
Actuated g/C Ratio	0.09	0.51			0.38	0.38	0.39	0.39	0.39			
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0			
Lane Grp Cap (vph)	300	1814			1907	594	651	578	583			
v/s Ratio Prot	0.08	c0.50			0.33	0.37	0.36	c0.38	0.37			
v/s Ratio Perm												
v/c Ratio	0.90	0.99			0.87	0.98	0.92	0.98	0.95			
Uniform Delay, d1	36.1	19.2			23.2	24.6	23.3	24.2	23.7			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	27.1	17.6			4.5	30.5	17.9	32.3	25.0			
Delay (s)	63.2	36.8			27.7	55.1	41.2	56.5	48.7			
Level of Service	E	D			C	E	D	E	D			
Approach Delay (s)		40.2			38.6			48.7			0.0	
Approach LOS		D			D			D			A	

Intersection Summary				
HCM Average Control Delay	41.8	HCM Level of Service	D	
HCM Volume to Capacity ratio	0.98			
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	105.2%	ICU Level of Service	G	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	249	2264	259	45	1748	59	637	67	151	41	30	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		0.97	0.95		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.90		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5060		3433	3171		1770	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5060		3433	3171		1770	1863	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	277	2516	288	50	1942	66	708	74	168	46	33	91
RTOR Reduction (vph)	0	0	72	0	2	0	0	90	0	0	0	85
Lane Group Flow (vph)	277	2516	216	50	2006	0	708	152	0	46	33	6
Turn Type	Prot		Prot	Prot			Prot			Prot		Prot
Protected Phases	7	4	4	3	8		5	2		1	6	6
Permitted Phases												
Actuated Green, G (s)	22.6	73.4	73.4	4.0	54.8		29.0	30.8		6.9	8.7	8.7
Effective Green, g (s)	22.6	73.4	73.4	4.0	54.8		29.0	30.8		6.9	8.7	8.7
Actuated g/C Ratio	0.17	0.56	0.56	0.03	0.42		0.22	0.23		0.05	0.07	0.07
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	305	2847	886	54	2115		759	745		93	124	105
v/s Ratio Prot	c0.16	0.49	0.14	0.03	c0.40		c0.21	0.05		0.03	c0.02	0.00
v/s Ratio Perm												
v/c Ratio	0.91	0.88	0.24	0.93	0.95		0.93	0.20		0.49	0.27	0.06
Uniform Delay, d1	53.2	25.1	14.7	63.4	36.8		50.1	40.3		60.4	58.2	57.4
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	28.9	3.6	0.1	94.6	9.9		18.2	0.1		4.1	1.2	0.2
Delay (s)	82.1	28.8	14.8	158.0	46.7		68.3	40.4		64.5	59.3	57.6
Level of Service	F	C	B	F	D		E	D		E	E	E
Approach Delay (s)		32.3			49.4			61.2			59.8	
Approach LOS		C			D			E			E	

Intersection Summary				
HCM Average Control Delay	43.0	HCM Level of Service	D	
HCM Volume to Capacity ratio	0.88			
Actuated Cycle Length (s)	131.1	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	83.7%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↱	↰	↑↑↑	↰↰	↱
Volume (vph)	2390	112	67	1790	253	152
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	5085	1583	1770	5085	3433	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	5085	1583	1770	5085	3433	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	2656	124	74	1989	281	169
RTOR Reduction (vph)	0	46	0	0	0	93
Lane Group Flow (vph)	2656	78	74	1989	281	76
Turn Type		Prot	Prot			Prot
Protected Phases	4	4	3	8	2	2
Permitted Phases						
Actuated Green, G (s)	45.3	45.3	3.9	53.2	11.1	11.1
Effective Green, g (s)	45.3	45.3	3.9	53.2	11.1	11.1
Actuated g/C Ratio	0.63	0.63	0.05	0.74	0.15	0.15
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	3186	992	95	3742	527	243
v/s Ratio Prot	c0.52	0.05	c0.04	0.39	c0.08	0.05
v/s Ratio Perm						
v/c Ratio	0.83	0.08	0.78	0.53	0.53	0.31
Uniform Delay, d1	10.6	5.3	33.8	4.1	28.2	27.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.0	0.0	32.2	0.1	1.0	0.7
Delay (s)	12.6	5.3	66.0	4.3	29.3	27.9
Level of Service	B	A	E	A	C	C
Approach Delay (s)	12.2			6.5	28.8	
Approach LOS	B			A	C	

Intersection Summary			
HCM Average Control Delay	11.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	72.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	67.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↱	↰↰	↑↑↑	↰	↱
Volume (vph)	2453	90	45	1655	202	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	0.97	0.91	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	5085	1583	3433	5085	1770	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	5085	1583	3433	5085	1770	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	2726	100	50	1839	224	112
RTOR Reduction (vph)	0	37	0	0	0	80
Lane Group Flow (vph)	2726	63	50	1839	224	32
Turn Type		Prot	Prot			Prot
Protected Phases	4	4	3	8	2	2
Permitted Phases						
Actuated Green, G (s)	47.5	47.5	2.5	54.0	13.5	13.5
Effective Green, g (s)	47.5	47.5	2.5	54.0	13.5	13.5
Actuated g/C Ratio	0.63	0.63	0.03	0.72	0.18	0.18
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	3199	996	114	3637	316	283
v/s Ratio Prot	c0.54	0.04	0.01	c0.36	c0.13	0.02
v/s Ratio Perm						
v/c Ratio	0.85	0.06	0.44	0.51	0.71	0.11
Uniform Delay, d1	11.2	5.4	35.8	4.8	29.2	26.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.4	0.0	2.7	0.1	7.1	0.2
Delay (s)	13.6	5.4	38.5	4.9	36.3	26.2
Level of Service	B	A	D	A	D	C
Approach Delay (s)	13.3			5.8	32.9	
Approach LOS	B			A	C	

Intersection Summary			
HCM Average Control Delay	11.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	75.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	482	1615	399	162	852	181	453	451	328	151	167	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.91		0.97	0.91		0.97	0.91	1.00	0.97	0.91	
Frt	1.00	0.97		1.00	0.97		1.00	1.00	0.85	1.00	0.92	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	4934		3433	4952		3433	5085	1583	3433	4661	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3433	4934		3433	4952		3433	5085	1583	3433	4661	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	536	1794	443	180	947	201	503	501	364	168	186	233
RTOR Reduction (vph)	0	45	0	0	35	0	0	0	108	0	197	0
Lane Group Flow (vph)	536	2192	0	180	1113	0	503	501	256	168	222	0
Turn Type	Prot			Prot			Prot		Prot	Prot		
Protected Phases	7	4		3	8		5	2	2	1	6	
Permitted Phases												
Actuated Green, G (s)	16.3	37.2		5.4	26.3		13.4	19.6	19.6	6.8	13.0	
Effective Green, g (s)	16.3	37.2		5.4	26.3		13.4	19.6	19.6	6.8	13.0	
Actuated g/C Ratio	0.19	0.44		0.06	0.31		0.16	0.23	0.23	0.08	0.15	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	658	2159		218	1532		541	1173	365	275	713	
v/s Ratio Prot	c0.16	c0.44		0.05	0.22		c0.15	0.10	c0.16	0.05	0.05	
v/s Ratio Perm												
v/c Ratio	0.81	1.02		0.83	0.73		0.93	0.43	0.70	0.61	0.31	
Uniform Delay, d1	32.9	23.9		39.3	26.1		35.3	27.9	30.0	37.8	32.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	7.7	23.3		21.8	1.7		22.5	0.3	6.0	4.0	0.3	
Delay (s)	40.6	47.2		61.1	27.9		57.8	28.2	36.0	41.8	32.3	
Level of Service	D	D		E	C		E	C	D	D	C	
Approach Delay (s)		45.9			32.4			41.1			35.0	
Approach LOS		D			C			D			C	

Intersection Summary				
HCM Average Control Delay	40.8	HCM Level of Service	D	
HCM Volume to Capacity ratio	0.91			
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	78.9%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	125	1233	559	82	603	74	368	172	149	80	128	119
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	0.97	0.91		0.97	0.91		0.97	0.91		1.00	0.95	
Frt	1.00	0.95		1.00	0.98		1.00	0.93		1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	4847		3433	5002		3433	4731		1770	3283	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	4847		3433	5002		3433	4731		1770	3283	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	139	1370	621	91	670	82	409	191	166	89	142	132
RTOR Reduction (vph)	0	94	0	0	17	0	0	135	0	0	115	0
Lane Group Flow (vph)	139	1897	0	91	735	0	409	222	0	89	159	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	5.5	31.8		3.6	29.9		10.8	13.3		6.9	9.4	
Effective Green, g (s)	5.5	31.8		3.6	29.9		10.8	13.3		6.9	9.4	
Actuated g/C Ratio	0.08	0.44		0.05	0.42		0.15	0.19		0.10	0.13	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	264	2153		173	2089		518	879		171	431	
v/s Ratio Prot	c0.04	c0.39		0.03	0.15		c0.12	c0.05		0.05	c0.05	
v/s Ratio Perm												
v/c Ratio	0.53	0.88		0.53	0.35		0.79	0.25		0.52	0.37	
Uniform Delay, d1	31.8	18.2		33.2	14.2		29.3	24.9		30.8	28.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.9	4.6		2.9	0.1		7.9	0.2		2.8	0.5	
Delay (s)	33.7	22.8		36.0	14.3		37.2	25.1		33.6	28.9	
Level of Service	C	C		D	B		D	C		C	C	
Approach Delay (s)		23.5			16.7			31.5			30.1	
Approach LOS		C			B			C			C	

Intersection Summary				
HCM Average Control Delay	24.2	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.74			
Actuated Cycle Length (s)	71.6	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	70.8%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	49	1271	148	8	659	23	55	14	32	28	8	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.90		1.00	0.88	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5006		1770	5059		1770	1669		1770	1642	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	5006		1770	5059		1770	1669		1770	1642	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	54	1412	164	9	732	26	61	16	36	31	9	34
RTOR Reduction (vph)	0	16	0	0	5	0	0	33	0	0	32	0
Lane Group Flow (vph)	54	1560	0	9	754	0	61	19	0	31	11	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	1.4	22.0		0.6	21.2		1.3	3.2		0.6	2.5	
Effective Green, g (s)	1.4	22.0		0.6	21.2		1.3	3.2		0.6	2.5	
Actuated g/C Ratio	0.03	0.52		0.01	0.50		0.03	0.08		0.01	0.06	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	58	2597		25	2530		54	126		25	97	
v/s Ratio Prot	c0.03	c0.31		0.01	0.15		c0.03	c0.01		0.02	0.01	
v/s Ratio Perm												
v/c Ratio	0.93	0.60		0.36	0.30		1.13	0.15		1.24	0.11	
Uniform Delay, d1	20.5	7.1		20.7	6.2		20.5	18.3		20.9	18.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	93.1	0.4		8.7	0.1		162.6	0.5		261.6	0.5	
Delay (s)	113.5	7.5		29.4	6.3		183.1	18.9		282.5	19.4	
Level of Service	F	A		C	A		F	B		F	B	
Approach Delay (s)		11.0			6.6			107.5			129.6	
Approach LOS		B			A			F			F	

Intersection Summary				
HCM Average Control Delay	17.3	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.48			
Actuated Cycle Length (s)	42.4	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	50.9%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	284	979	65	22	474	25	40	46	35	24	33	182
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.94		1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5038		1770	5047		1770	1742		1770	1627	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	5038		1770	5047		1770	1742		1770	1627	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	316	1088	72	24	527	28	44	51	39	27	37	202
RTOR Reduction (vph)	0	9	0	0	9	0	0	33	0	0	172	0
Lane Group Flow (vph)	316	1151	0	24	546	0	44	57	0	27	67	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	11.9	26.2		0.7	15.0		1.4	7.8		1.4	7.8	
Effective Green, g (s)	11.9	26.2		0.7	15.0		1.4	7.8		1.4	7.8	
Actuated g/C Ratio	0.23	0.50		0.01	0.29		0.03	0.15		0.03	0.15	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	404	2534		24	1453		48	261		48	244	
v/s Ratio Prot	c0.18	c0.23		0.01	0.11		c0.02	0.03		0.02	c0.04	
v/s Ratio Perm												
v/c Ratio	0.78	0.45		1.00	0.38		0.92	0.22		0.56	0.28	
Uniform Delay, d1	18.9	8.3		25.7	14.8		25.3	19.5		25.0	19.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	9.5	0.1		183.7	0.2		97.8	0.4		14.2	0.6	
Delay (s)	28.4	8.5		209.4	15.0		123.1	19.9		39.3	20.3	
Level of Service	C	A		F	B		F	B		D	C	
Approach Delay (s)		12.7			23.0			53.8			22.2	
Approach LOS		B			C			D			C	

Intersection Summary				
HCM Average Control Delay	18.4	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.52			
Actuated Cycle Length (s)	52.1	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	55.1%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	841	180	92	424	113	255
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.91		1.00	0.91	0.97	1.00
Frt	0.97		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	4951		1770	5085	3433	1583
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	4951		1770	5085	3433	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	934	200	102	471	126	283
RTOR Reduction (vph)	55	0	0	0	0	229
Lane Group Flow (vph)	1079	0	102	471	126	54
Turn Type			Prot			Prot
Protected Phases	4		3	8	2	2
Permitted Phases						
Actuated Green, G (s)	16.4		2.4	22.8	5.8	5.8
Effective Green, g (s)	16.4		2.4	22.8	5.8	5.8
Actuated g/C Ratio	0.45		0.07	0.62	0.16	0.16
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2218		116	3168	544	251
v/s Ratio Prot	c0.22		c0.06	0.09	c0.04	0.03
v/s Ratio Perm						
v/c Ratio	0.49		0.88	0.15	0.23	0.22
Uniform Delay, d1	7.1		17.0	2.9	13.5	13.4
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2		47.7	0.0	0.2	0.4
Delay (s)	7.3		64.6	2.9	13.7	13.9
Level of Service	A		E	A	B	B
Approach Delay (s)	7.3			13.9	13.8	
Approach LOS	A			B	B	

Intersection Summary				
HCM Average Control Delay	10.3	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.46			
Actuated Cycle Length (s)	36.6	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	42.7%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	101	30	30	194	13	255	54	853	168	295	425	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95			1.00	1.00	0.97	0.91		0.97	0.91	
Frt	1.00	0.94			1.00	0.85	1.00	0.98		1.00	0.99	
Flt Protected	0.95	0.99			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1681	1649			1779	1583	3433	4960		3433	5048	
Flt Permitted	0.95	0.99			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1681	1649			1779	1583	3433	4960		3433	5048	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	112	33	33	216	14	283	60	948	187	328	472	24
RTOR Reduction (vph)	0	29	0	0	0	226	0	34	0	0	6	0
Lane Group Flow (vph)	91	58	0	0	230	57	60	1101	0	328	490	0
Turn Type	Split			Split		Perm	Prot			Prot		
Protected Phases	2	2		6	6		3	8		7	4	
Permitted Phases						6						
Actuated Green, G (s)	7.4	7.4			13.8	13.8	2.4	21.6		9.8	29.0	
Effective Green, g (s)	7.4	7.4			13.8	13.8	2.4	21.6		9.8	29.0	
Actuated g/C Ratio	0.11	0.11			0.20	0.20	0.03	0.31		0.14	0.42	
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	181	178			358	318	120	1562		490	2134	
v/s Ratio Prot	c0.05	0.03			c0.13		0.02	c0.22		c0.10	0.10	
v/s Ratio Perm						0.04						
v/c Ratio	0.50	0.32			0.64	0.18	0.50	0.71		0.67	0.23	
Uniform Delay, d1	28.9	28.3			25.1	22.7	32.5	20.7		27.9	12.7	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.2	1.1			3.9	0.3	3.3	1.5		3.5	0.1	
Delay (s)	31.1	29.3			29.1	23.0	35.8	22.2		31.3	12.7	
Level of Service	C	C			C	C	D	C		C	B	
Approach Delay (s)		30.2			25.7			22.9			20.1	
Approach LOS		C			C			C			C	

Intersection Summary				
HCM Average Control Delay	23.0	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.65			
Actuated Cycle Length (s)	68.6	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	56.7%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	122	108	178	14	56	118	116	502	10	187	589	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.90		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1673		1770	3529		1770	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	1863	1583	1770	1673		1770	3529		1770	3539	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	136	120	198	16	62	131	129	558	11	208	654	100
RTOR Reduction (vph)	0	0	134	0	106	0	0	2	0	0	0	74
Lane Group Flow (vph)	136	120	64	16	87	0	129	567	0	208	654	26
Turn Type	Prot		Perm	Prot			Prot			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									6
Actuated Green, G (s)	7.7	17.7	17.7	0.6	10.6		6.3	14.4		6.3	14.4	14.4
Effective Green, g (s)	7.7	17.7	17.7	0.6	10.6		6.3	14.4		6.3	14.4	14.4
Actuated g/C Ratio	0.14	0.32	0.32	0.01	0.19		0.11	0.26		0.11	0.26	0.26
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	248	600	509	19	322		203	924		203	927	414
v/s Ratio Prot	c0.08	0.06		0.01	c0.05		0.07	0.16		c0.12	c0.18	
v/s Ratio Perm			0.04									0.02
v/c Ratio	0.55	0.20	0.13	0.84	0.27		0.64	0.61		1.02	0.71	0.06
Uniform Delay, d1	22.0	13.5	13.2	27.2	18.9		23.3	17.9		24.4	18.4	15.2
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.5	0.2	0.1	131.7	0.5		6.4	1.2		69.7	2.5	0.1
Delay (s)	24.5	13.7	13.3	158.9	19.4		29.6	19.1		94.1	20.8	15.3
Level of Service	C	B	B	F	B		C	B		F	C	B
Approach Delay (s)		16.8			30.0			21.0			36.1	
Approach LOS		B			C			C			D	

Intersection Summary				
HCM Average Control Delay	27.2	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.61			
Actuated Cycle Length (s)	55.0	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	54.8%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	217	12	10	144	2	98	29	747	206	137	534	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.91		1.00	0.91	
Frt	1.00	0.93		1.00	1.00	0.85	1.00	0.97		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1735		1770	1863	1583	1770	4920		1770	5042	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1735		1770	1863	1583	1770	4920		1770	5042	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	241	13	11	160	2	109	32	830	229	152	593	36
RTOR Reduction (vph)	0	11	0	0	0	96	0	65	0	0	8	0
Lane Group Flow (vph)	241	13	0	160	2	13	32	994	0	152	621	0
Turn Type	Prot			Prot		Prot	Prot			Prot		
Protected Phases	1	6		5	2	2	7	4		3	8	
Permitted Phases												
Actuated Green, G (s)	11.8	2.3		16.6	7.1	7.1	2.7	18.1		6.1	21.5	
Effective Green, g (s)	11.8	2.3		16.6	7.1	7.1	2.7	18.1		6.1	21.5	
Actuated g/C Ratio	0.20	0.04		0.28	0.12	0.12	0.05	0.31		0.10	0.36	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	353	68		497	224	190	81	1507		183	1834	
v/s Ratio Prot	c0.14	c0.01		c0.09	0.00	0.01	0.02	c0.20		c0.09	c0.12	
v/s Ratio Perm												
v/c Ratio	0.68	0.20		0.32	0.01	0.07	0.40	0.66		0.83	0.34	
Uniform Delay, d1	21.9	27.5		16.8	22.9	23.1	27.4	17.8		26.0	13.6	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	5.4	1.4		0.4	0.0	0.2	3.2	1.1		26.1	0.1	
Delay (s)	27.3	28.9		17.2	22.9	23.2	30.6	18.9		52.1	13.8	
Level of Service	C	C		B	C	C	C	B		D	B	
Approach Delay (s)		27.4			19.7			19.2			21.2	
Approach LOS		C			B			B			C	

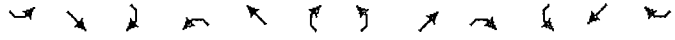
Intersection Summary				
HCM Average Control Delay	20.8	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.65			
Actuated Cycle Length (s)	59.1	Sum of lost time (s)	20.0	
Intersection Capacity Utilization	55.3%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	306	244	127	33	102	18	97	376	40	26	443	258
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85		0.98		1.00	0.99		1.00	0.94	
Flt Protected	0.95	1.00	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583		1813		1770	3489		1770	3344	
Flt Permitted	0.95	1.00	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1583		1813		1770	3489		1770	3344	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	340	271	141	37	113	20	108	418	44	29	492	287
RTOR Reduction (vph)	0	0	109	0	8	0	0	10	0	0	113	0
Lane Group Flow (vph)	340	271	32	0	162	0	108	452	0	29	666	0
Turn Type	Split		Perm	Split			Prot			Prot		
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	15.1	15.1	15.1		10.9		5.1	21.9		1.9	18.7	
Effective Green, g (s)	15.1	15.1	15.1		10.9		5.1	21.9		1.9	18.7	
Actuated g/C Ratio	0.23	0.23	0.23		0.17		0.08	0.33		0.03	0.28	
Clearance Time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	406	428	363		300		137	1161		51	950	
v/s Ratio Prot	c0.19	0.15			c0.09		c0.06	c0.13		0.02	c0.20	
v/s Ratio Perm			0.02									
v/c Ratio	0.84	0.63	0.09		0.54		0.79	0.39		0.57	0.70	
Uniform Delay, d1	24.2	22.9	19.9		25.2		29.8	16.8		31.5	21.1	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	14.0	3.1	0.1		2.0		25.2	0.2		13.7	2.4	
Delay (s)	38.1	25.9	20.0		27.2		55.0	17.0		45.3	23.4	
Level of Service	D	C	C		C		E	B		D	C	
Approach Delay (s)		30.3			27.2			24.2			24.2	
Approach LOS		C			C			C			C	

Intersection Summary				
HCM Average Control Delay	26.4	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.76			
Actuated Cycle Length (s)	65.8	Sum of lost time (s)	20.0	
Intersection Capacity Utilization	64.5%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBR	EBR2	NWL2	NWL	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	74	279	324	99	173	113	266	1035	95	156	656	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.97		0.97	0.91		1.00	0.91	
Frt	1.00	0.85	0.85	1.00	0.94		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1583	1583	1770	3299		3433	5021		1770	5037	
Flt Permitted	0.95	1.00	1.00	0.95	0.97		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1583	1583	1770	3299		3433	5021		1770	5037	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	82	310	360	110	192	126	296	1150	106	173	729	49
RTOR Reduction (vph)	0	0	267	0	113	0	0	15	0	0	10	0
Lane Group Flow (vph)	82	310	93	110	205	0	296	1241	0	173	768	0
Turn Type		Perm	Perm	Split			Prot			Prot		
Protected Phases	2			6	6		3	8		7	4	
Permitted Phases		2	2									
Actuated Green, G (s)	16.7	16.7	16.7	6.8	6.8		9.5	19.1		8.8	18.4	
Effective Green, g (s)	16.7	16.7	16.7	6.8	6.8		9.5	19.1		8.8	18.4	
Actuated g/C Ratio	0.25	0.25	0.25	0.10	0.10		0.14	0.28		0.13	0.27	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	439	392	392	179	333		484	1423		231	1375	
v/s Ratio Prot	0.05			c0.06	0.06		0.09	c0.25		c0.10	0.15	
v/s Ratio Perm		c0.20	0.06									
v/c Ratio	0.19	0.79	0.24	0.61	0.61		0.61	0.87		0.75	0.56	
Uniform Delay, d1	20.0	23.7	20.3	29.0	29.0		27.2	23.0		28.2	21.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	10.4	0.3	6.1	3.4		2.3	6.2		12.5	0.5	
Delay (s)	20.2	34.1	20.6	35.2	32.4		29.5	29.2		40.7	21.5	
Level of Service	C	C	C	D	C		C	C		D	C	
Approach Delay (s)	26.1				33.1			29.2			25.0	
Approach LOS	C				C			C			C	

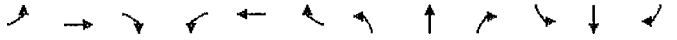
Intersection Summary				
HCM Average Control Delay	28.0	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.73			
Actuated Cycle Length (s)	67.4	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	58.0%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	203	26	149	4	11	4	102	25	8	2	7	98
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	226	29	166	4	12	4	113	28	9	2	8	109

Direction, Lane #	SE 1	SE 2	NW 1	NE 1	SW 1
Volume Total (vph)	254	166	21	150	119
Volume Left (vph)	226	0	4	113	2
Volume Right (vph)	0	166	4	9	109
Hadj (s)	0.48	-0.67	-0.05	0.15	-0.51
Departure Headway (s)	5.7	4.5	5.2	5.2	4.7
Degree Utilization, x	0.40	0.21	0.03	0.22	0.15
Capacity (veh/h)	608	760	637	646	713
Control Delay (s)	11.3	7.5	8.3	9.7	8.5
Approach Delay (s)	9.8		8.3	9.7	8.5
Approach LOS	A		A	A	A

Intersection Summary			
Delay	9.5		
HCM Level of Service	A		
Intersection Capacity Utilization	40.1%	ICU Level of Service	A
Analysis Period (min)	15		



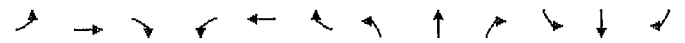
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	119	52	72	57	27	9	111	755	138	6	361	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85		0.99		1.00	0.98		1.00	0.97	
Flt Protected		0.97	1.00		0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1800	1583		1784		1770	3457		1770	3439	
Flt Permitted		0.97	1.00		0.97		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1800	1583		1784		1770	3457		1770	3439	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	132	58	80	63	30	10	123	839	153	7	401	93
RTOR Reduction (vph)	0	0	68	0	6	0	0	15	0	0	22	0
Lane Group Flow (vph)	0	190	12	0	97	0	123	977	0	7	472	0
Turn Type	Split		Perm	Split			Prot			Prot		
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)		8.8	8.8		6.7		5.9	26.4		0.7	21.2	
Effective Green, g (s)		8.8	8.8		6.7		5.9	26.4		0.7	21.2	
Actuated g/C Ratio		0.15	0.15		0.11		0.10	0.45		0.01	0.36	
Clearance Time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		270	238		204		178	1557		21	1244	
v/s Ratio Prot		c0.11			c0.05		c0.07	c0.28		0.00	0.14	
v/s Ratio Perm			0.01									
v/c Ratio		0.70	0.05		0.47		0.69	0.63		0.33	0.38	
Uniform Delay, d1		23.7	21.3		24.3		25.5	12.3		28.7	13.8	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		8.1	0.1		1.7		11.0	0.8		9.1	0.2	
Delay (s)		31.7	21.4		26.0		36.5	13.1		37.9	14.0	
Level of Service		C	C		C		D	B		D	B	
Approach Delay (s)		28.7			26.0			15.7			14.4	
Approach LOS		C			C			B			B	

Intersection Summary					
HCM Average Control Delay	17.7	HCM Level of Service		B	
HCM Volume to Capacity ratio	0.61				
Actuated Cycle Length (s)	58.6	Sum of lost time (s)		12.0	
Intersection Capacity Utilization	50.4%	ICU Level of Service		A	
Analysis Period (min)	15				
c Critical Lane Group					



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱		↰↰	↑↑					↰	↔	↱
Volume (vph)	0	649	141	631	910	0	0	0	0	906	1	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		0.97	0.95					0.95	0.91	0.95
Frt		0.97		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.95	1.00
Satd. Flow (prot)		3444		3433	3539					1681	1612	1504
Flt Permitted		1.00		0.95	1.00					0.95	0.95	1.00
Satd. Flow (perm)		3444		3433	3539					1681	1612	1504
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	721	157	701	1011	0	0	0	0	1007	1	83
RTOR Reduction (vph)	0	27	0	0	0	0	0	0	0	0	1	49
Lane Group Flow (vph)	0	851	0	701	1011	0	0	0	0	503	512	26
Turn Type				Prot						Split		Perm
Protected Phases		4		3	8					6	6	
Permitted Phases												6
Actuated Green, G (s)		18.2		15.4	37.6					23.8	23.8	23.8
Effective Green, g (s)		18.2		15.4	37.6					23.8	23.8	23.8
Actuated g/C Ratio		0.26		0.22	0.54					0.34	0.34	0.34
Clearance Time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		903		762	1917					576	553	516
v/s Ratio Prot		c0.25		c0.20	0.29					0.30	c0.32	
v/s Ratio Perm												0.02
v/c Ratio		0.94		0.92	0.53					0.87	0.93	0.05
Uniform Delay, d1		25.1		26.4	10.2					21.4	22.0	15.2
Progression Factor		1.00		1.00	1.00					1.00	1.00	1.00
Incremental Delay, d2		17.6		16.1	0.3					13.7	21.6	0.0
Delay (s)		42.7		42.5	10.5					35.1	43.6	15.3
Level of Service		D		D	B					D	D	B
Approach Delay (s)		42.7			23.6			0.0			37.7	
Approach LOS		D			C			A			D	

Intersection Summary				
HCM Average Control Delay	32.3	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.93			
Actuated Cycle Length (s)	69.4	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	87.5%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑			↑↑	↱	↰	↔	↱			
Volume (vph)	127	1452	0	0	1045	872	452	7	700	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	0.97	0.95			0.95	1.00	0.95	0.91	0.95			
Frt	1.00	1.00			1.00	0.85	1.00	0.87	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99	1.00			
Satd. Flow (prot)	3433	3539			3539	1583	1681	1469	1504			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99	1.00			
Satd. Flow (perm)	3433	3539			3539	1583	1681	1469	1504			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	141	1613	0	0	1161	969	502	8	778	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	524	0	11	11	0	0	0
Lane Group Flow (vph)	141	1613	0	0	1161	445	447	410	409	0	0	0
Turn Type	Prot					Prot	Split		Perm			
Protected Phases	7	4			8	8	2	2				
Permitted Phases									2			
Actuated Green, G (s)	3.5	31.6			24.1	24.1	19.5	19.5	19.5			
Effective Green, g (s)	3.5	31.6			24.1	24.1	19.5	19.5	19.5			
Actuated g/C Ratio	0.06	0.53			0.41	0.41	0.33	0.33	0.33			
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0			
Lane Grp Cap (vph)	203	1892			1443	646	555	485	496			
v/s Ratio Prot	0.04	c0.46			0.33	0.28	0.27	c0.28				
v/s Ratio Perm									0.27			
v/c Ratio	0.69	0.85			0.80	0.69	0.81	0.85	0.83			
Uniform Delay, d1	27.3	11.8			15.4	14.4	18.1	18.4	18.2			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	9.9	3.9			3.4	3.1	8.3	12.8	10.7			
Delay (s)	37.1	15.7			18.8	17.5	26.4	31.2	29.0			
Level of Service	D	B			B	B	C	C	C			
Approach Delay (s)		17.4			18.2			28.8			0.0	
Approach LOS		B			B			C			A	

Intersection Summary				
HCM Average Control Delay	20.6	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.85			
Actuated Cycle Length (s)	59.1	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	87.5%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	37	50	490	31	108	109	971	220	188	1503	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.95	0.91	0.95	0.95	0.91	0.95	1.00	0.91		1.00	0.91	
Frt	1.00	0.98	0.85	1.00	0.99	0.85	1.00	0.97		1.00	1.00	
Flt Protected	0.95	0.99	1.00	0.95	0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1681	1649	1504	1681	1617	1504	1770	4945		1770	5064	
Flt Permitted	0.95	0.99	1.00	0.95	0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1681	1649	1504	1681	1617	1504	1770	4945		1770	5064	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	56	41	56	544	34	120	121	1079	244	209	1670	48
RTOR Reduction (vph)	0	7	44	0	2	85	0	39	0	0	3	0
Lane Group Flow (vph)	50	48	4	294	294	23	121	1284	0	209	1715	0
Turn Type	Split		Prot	Split		Prot	Prot			Prot		
Protected Phases	4	4	4	8	8	8	5	2		1		
Permitted Phases											6	
Actuated Green, G (s)	6.4	6.4	6.4	16.2	16.2	16.2	6.8	23.0		13.3	29.5	
Effective Green, g (s)	6.4	6.4	6.4	16.2	16.2	16.2	6.8	23.0		13.3	29.5	
Actuated g/C Ratio	0.09	0.09	0.09	0.22	0.22	0.22	0.09	0.31		0.18	0.39	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	144	141	129	364	350	325	161	1518		314	1994	
v/s Ratio Prot	c0.03	0.03	0.00	0.17	c0.18	0.02	0.07	0.26		c0.12		
v/s Ratio Perm											c0.34	
v/c Ratio	0.35	0.34	0.03	0.81	0.84	0.07	0.75	0.85		0.67	0.86	
Uniform Delay, d1	32.3	32.3	31.4	27.9	28.1	23.4	33.2	24.3		28.7	20.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.5	1.4	0.1	12.4	16.5	0.1	17.8	4.5		5.2	4.0	
Delay (s)	33.7	33.7	31.5	40.2	44.6	23.5	51.0	28.8		34.0	24.9	
Level of Service	C	C	C	D	D	C	D	C		C	C	
Approach Delay (s)		33.0			39.5			30.7			25.8	
Approach LOS		C			D			C			C	

Intersection Summary				
HCM Average Control Delay	30.0	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.79			
Actuated Cycle Length (s)	74.9	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	68.2%	ICU Level of Service	C	
Analysis Period (min)	15			

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	223	860	220	405	1086	0	0	740	831
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0	4.0	4.0	4.0	4.0			4.0	4.0
Lane Util. Factor				0.97	0.91	1.00	0.97	0.95			0.86	0.86
Frpb, ped/bikes				1.00	1.00	1.00	1.00	1.00			0.91	1.00
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00			1.00	1.00
Frt				1.00	1.00	0.85	1.00	1.00			0.95	0.85
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				3433	5085	1583	3433	3539			4142	1362
Flt Permitted				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)				3433	5085	1583	3433	3539			4142	1362
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	248	956	244	450	1207	0	0	822	923
RTOR Reduction (vph)	0	0	0	0	0	61	0	0	0	0	7	7
Lane Group Flow (vph)	0	0	0	248	956	183	450	1207	0	0	1277	454
Confl. Peds. (#/hr)												200
Turn Type				Prot		Prot	Prot					Prot
Protected Phases				3	8	8	5	2			6	6
Permitted Phases												
Actuated Green, G (s)				16.2	16.2	16.2	10.0	39.9			25.9	25.9
Effective Green, g (s)				16.2	16.2	16.2	10.0	39.9			25.9	25.9
Actuated g/C Ratio				0.25	0.25	0.25	0.16	0.62			0.40	0.40
Clearance Time (s)				4.0	4.0	4.0	4.0	4.0			4.0	4.0
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)				868	1285	400	536	2203			1674	550
v/s Ratio Prot				0.07	c0.19	0.12	c0.13	0.34			0.31	c0.33
v/s Ratio Perm												
v/c Ratio				0.29	0.74	0.46	0.84	0.55			0.76	0.83
Uniform Delay, d1				19.3	22.0	20.2	26.3	6.9			16.5	17.1
Progression Factor				1.00	1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2				0.2	2.4	0.8	11.1	0.3			2.1	9.8
Delay (s)				19.5	24.4	21.1	37.4	7.2			18.6	26.9
Level of Service				B	C	C	D	A			B	C
Approach Delay (s)		0.0			23.0			15.4			20.8	
Approach LOS		A			C			B			C	

Intersection Summary				
HCM Average Control Delay	19.6	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.80			
Actuated Cycle Length (s)	64.1	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	113.8%	ICU Level of Service	H	
Analysis Period (min)	15			

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	537	1031	133	0	0	0	0	908	442	280	640	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Lane Util. Factor	0.91	0.86	0.91					0.86		1.00	0.91	
Frt	1.00	1.00	0.85					0.95		1.00	1.00	
Flt Protected	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	1610	3190	1441					6093		1770	5085	
Flt Permitted	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	1610	3190	1441					6093		1770	5085	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	597	1146	148	0	0	0	0	1009	491	311	711	0
RTOR Reduction (vph)	0	1	80	0	0	0	0	42	0	0	0	0
Lane Group Flow (vph)	537	1220	53	0	0	0	0	1458	0	311	711	0
Turn Type	Split		Prot							Prot		
Protected Phases	4	4	4					2		1	6	
Permitted Phases												
Actuated Green, G (s)	32.0	32.0	32.0					20.6		15.4	40.0	
Effective Green, g (s)	32.0	32.0	32.0					20.6		15.4	40.0	
Actuated g/C Ratio	0.40	0.40	0.40					0.26		0.19	0.50	
Clearance Time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	644	1276	576					1569		341	2543	
v/s Ratio Prot	0.33	c0.38	0.04					c0.24		c0.18	0.14	
v/s Ratio Perm												
v/c Ratio	0.83	0.96	0.09					1.07dr		0.91	0.28	
Uniform Delay, d1	21.6	23.3	15.0					29.0		31.6	11.6	
Progression Factor	1.00	1.00	1.00					1.00		1.00	1.00	
Incremental Delay, d2	9.1	15.7	0.1					10.0		27.6	0.1	
Delay (s)	30.7	39.0	15.0					39.0		59.2	11.7	
Level of Service	C	D	B					D		E	B	
Approach Delay (s)		35.0			0.0			39.0			26.2	
Approach LOS		C			A			D			C	

Intersection Summary				
HCM Average Control Delay	34.3	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.94			
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	113.8%	ICU Level of Service	H	
Analysis Period (min)	15			

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group

Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Volume (vph)	68	394	0	367	97	31	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		0.95		1.00	1.00
Frt	1.00	1.00		0.97		1.00	0.85
Flt Protected	0.95	1.00		1.00		0.95	1.00
Satd. Flow (prot)	1770	3539		3428		1770	1583
Flt Permitted	0.95	1.00		1.00		0.95	1.00
Satd. Flow (perm)	1770	3539		3428		1770	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	76	438	0	408	108	34	52
RTOR Reduction (vph)	0	0	0	47	0	0	46
Lane Group Flow (vph)	76	438	0	469	0	34	6
Turn Type	Prot		Prot				Prot
Protected Phases	7	4	3	8		6	6
Permitted Phases							
Actuated Green, G (s)	1.3	13.6		8.3		3.0	3.0
Effective Green, g (s)	1.3	13.6		8.3		3.0	3.0
Actuated g/C Ratio	0.05	0.55		0.34		0.12	0.12
Clearance Time (s)	4.0	4.0		4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0		3.0	3.0
Lane Grp Cap (vph)	94	1957		1157		216	193
v/s Ratio Prot	c0.04	0.12		c0.14		c0.02	0.00
v/s Ratio Perm							
v/c Ratio	0.81	0.22		0.41		0.16	0.03
Uniform Delay, d1	11.5	2.8		6.3		9.7	9.5
Progression Factor	1.00	1.00		1.00		1.00	1.00
Incremental Delay, d2	38.1	0.1		0.2		0.3	0.1
Delay (s)	49.6	2.9		6.5		10.0	9.6
Level of Service	D	A		A		B	A
Approach Delay (s)		9.8		6.5		9.8	
Approach LOS		A		A		A	

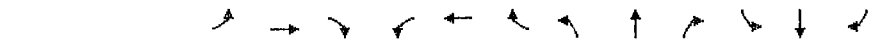
Intersection Summary				
HCM Average Control Delay	8.3	HCM Level of Service	A	
HCM Volume to Capacity ratio	0.39			
Actuated Cycle Length (s)	24.6	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	30.3%	ICU Level of Service	A	
Analysis Period (min)	15			

c Critical Lane Group



Movement	EBL	EBR	EBR2	WBL	WBT	WBR	NBL	NBT	NBR2	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	114	293	331	126	162	99	370	834	332	272	160	141
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.88	1.00	1.00	1.00		1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.85	0.85	1.00	0.94		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	2787	1583	1770	1757		1770	3539	1583	3433	3539	1583
Flt Permitted	0.58	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1085	2787	1583	1770	1757		1770	3539	1583	3433	3539	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	127	326	368	140	180	110	411	927	369	302	178	157
RTOR Reduction (vph)	0	0	299	0	28	0	0	0	212	0	0	123
Lane Group Flow (vph)	127	326	69	140	262	0	411	927	157	302	178	34
Turn Type	custom	custom	custom	Prot			Prot		Perm	Prot		Perm
Protected Phases				3	8		5	2		1	6	
Permitted Phases	4	4	4						2			6
Actuated Green, G (s)	13.8	13.8	13.8	8.0	25.8		20.1	26.7	26.7	9.5	16.1	16.1
Effective Green, g (s)	13.8	13.8	13.8	8.0	25.8		20.1	26.7	26.7	9.5	16.1	16.1
Actuated g/C Ratio	0.19	0.19	0.19	0.11	0.35		0.27	0.36	0.36	0.13	0.22	0.22
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	202	520	295	191	613		481	1277	571	441	770	344
v/s Ratio Prot				c0.08	0.15		c0.23	c0.26		0.09	0.05	
v/s Ratio Perm	c0.12	0.12	0.04						0.10			0.02
v/c Ratio	0.63	0.63	0.23	0.73	0.43		0.85	0.73	0.27	0.68	0.23	0.10
Uniform Delay, d1	27.7	27.7	25.6	32.0	18.4		25.6	20.5	16.8	30.8	23.9	23.2
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	6.0	2.4	0.4	13.5	0.5		13.8	2.1	0.3	4.4	0.2	0.1
Delay (s)	33.7	30.1	26.0	45.5	18.9		39.4	22.6	17.0	35.2	24.0	23.3
Level of Service	C	C	C	D	B		D	C	B	D	C	C
Approach Delay (s)					27.6			25.4			29.1	
Approach LOS					C			C			C	

Intersection Summary				
HCM Average Control Delay	27.1	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.73			
Actuated Cycle Length (s)	74.0	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	65.0%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	935	0	221	0	0	0	0	651	213	358	252	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95	1.00					0.95		0.97	0.95	
Frt	1.00	1.00	0.85					0.96		1.00	1.00	
Flt Protected	0.95	0.95	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	1681	1681	1583					3408		3433	3539	
Flt Permitted	0.95	0.95	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	1681	1681	1583					3408		3433	3539	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1039	0	246	0	0	0	0	723	237	398	280	0
RTOR Reduction (vph)	0	0	160	0	0	0	0	49	0	0	0	0
Lane Group Flow (vph)	519	520	86	0	0	0	0	911	0	398	280	0
Turn Type	Split		Prot							Prot		
Protected Phases	4	4	4					2		1	6	
Permitted Phases												
Actuated Green, G (s)	22.2	22.2	22.2					20.3		9.0	33.3	
Effective Green, g (s)	22.2	22.2	22.2					20.3		9.0	33.3	
Actuated g/C Ratio	0.35	0.35	0.35					0.32		0.14	0.52	
Clearance Time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	588	588	553					1089		487	1856	
v/s Ratio Prot	0.31	c0.31	0.05					c0.27		c0.12	0.08	
v/s Ratio Perm												
v/c Ratio	0.88	0.88	0.16					0.84		0.82	0.15	
Uniform Delay, d1	19.4	19.4	14.2					20.1		26.5	7.8	
Progression Factor	1.00	1.00	1.00					1.00		1.00	1.00	
Incremental Delay, d2	14.6	14.7	0.1					5.7		10.2	0.0	
Delay (s)	34.0	34.2	14.3					25.8		36.7	7.8	
Level of Service	C	C	B					C		D	A	
Approach Delay (s)		30.3			0.0			25.8			24.8	
Approach LOS		C			A			C			C	

Intersection Summary				
HCM Average Control Delay	27.5	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.85			
Actuated Cycle Length (s)	63.5	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	70.9%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	131	459	41	94	405	412	49	132	107	237	54	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		0.97	1.00	
Frt	1.00	0.99		1.00	0.92		1.00	0.93		1.00	0.92	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3495		1770	3271		1770	1738		3433	1708	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3495		1770	3271		1770	1738		3433	1708	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	146	510	46	104	450	458	54	147	119	263	60	74
RTOR Reduction (vph)	0	11	0	0	305	0	0	51	0	0	53	0
Lane Group Flow (vph)	146	545	0	104	603	0	54	215	0	263	81	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												
Actuated Green, G (s)	5.7	17.7		3.4	15.4		2.5	13.2		5.4	16.1	
Effective Green, g (s)	5.7	17.7		3.4	15.4		2.5	13.2		5.4	16.1	
Actuated g/C Ratio	0.10	0.32		0.06	0.28		0.04	0.24		0.10	0.29	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	181	1111		108	904		79	412		333	494	
v/s Ratio Prot	c0.08	0.16		0.06	c0.18		0.03	c0.12		c0.08	c0.05	
v/s Ratio Perm												
v/c Ratio	0.81	0.49		0.96	0.67		0.68	0.52		0.79	0.16	
Uniform Delay, d1	24.5	15.4		26.1	17.9		26.2	18.5		24.6	14.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	22.4	0.3		74.3	1.9		21.7	1.2		11.8	0.2	
Delay (s)	46.9	15.7		100.4	19.7		47.9	19.7		36.4	14.9	
Level of Service	D	B		F	B		D	B		D	B	
Approach Delay (s)		22.2			28.0			24.5			29.1	
Approach LOS		C			C			C			C	

Intersection Summary				
HCM Average Control Delay	26.1	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.68			
Actuated Cycle Length (s)	55.7	Sum of lost time (s)	20.0	
Intersection Capacity Utilization	65.3%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	WBL	WBR	SEL	SET	NWT	NWR	NWR2	SWL	SWR
Lane Configurations									
Volume (vph)	0	0	277	508	640	0	196	151	257
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0	5.0	4.0		4.0	4.0	4.0
Lane Util. Factor			0.97	0.95	0.95		1.00	0.97	1.00
Frt			1.00	1.00	1.00		0.85	1.00	0.85
Flt Protected			0.95	1.00	1.00		1.00	0.95	1.00
Satd. Flow (prot)			3433	3539	3539		1583	3433	1583
Flt Permitted			0.95	1.00	1.00		1.00	0.95	1.00
Satd. Flow (perm)			3433	3539	3539		1583	3433	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	308	564	711	0	218	168	286
RTOR Reduction (vph)	0	0	0	0	0	0	141	0	234
Lane Group Flow (vph)	0	0	308	564	711	0	77	168	52
Turn Type			Prot				Perm		Perm
Protected Phases			5	2	6			4	
Permitted Phases							6		4
Actuated Green, G (s)			9.7	29.1	16.4		16.4	8.4	8.4
Effective Green, g (s)			9.7	29.1	16.4		16.4	8.4	8.4
Actuated g/C Ratio			0.21	0.63	0.35		0.35	0.18	0.18
Clearance Time (s)			4.0	5.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)			3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)			716	2215	1248		558	620	286
v/s Ratio Prot			c0.09	0.16	c0.20			c0.05	
v/s Ratio Perm							0.05		0.03
v/c Ratio			0.43	0.25	0.57		0.14	0.27	0.18
Uniform Delay, d1			16.0	3.9	12.2		10.2	16.4	16.1
Progression Factor			1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2			0.4	0.1	0.6		0.1	0.2	0.3
Delay (s)			16.4	3.9	12.8		10.4	16.6	16.4
Level of Service			B	A	B		B	B	B
Approach Delay (s)	0.0			8.3	12.2			16.5	
Approach LOS	A			A	B			B	

Intersection Summary				
HCM Average Control Delay	11.6	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.46			
Actuated Cycle Length (s)	46.5	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	40.3%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL2	EBL	EBR	SEL	SET	SER	NWL	NWT	NWR	SWL	SWR
Lane Configurations											
Volume (vph)	411	0	248	278	386	0	0	413	263	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		
Lane Util. Factor	0.95	0.95	1.00	0.97	0.95			0.95	1.00		
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		
Flt Protected	0.95	0.95	1.00	0.95	1.00			1.00	1.00		
Satd. Flow (prot)	1681	1681	1583	3433	3539			3539	1583		
Flt Permitted	0.95	0.95	1.00	0.95	1.00			1.00	1.00		
Satd. Flow (perm)	1681	1681	1583	3433	3539			3539	1583		
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	457	0	276	309	429	0	0	459	292	0	0
RTOR Reduction (vph)	0	0	200	0	0	0	0	0	205	0	0
Lane Group Flow (vph)	228	229	76	309	429	0	0	459	87	0	0
Turn Type	Split		Perm	Prot					Perm		
Protected Phases	4	4		1	6			2			
Permitted Phases			4						2		
Actuated Green, G (s)	11.2	11.2	11.2	5.2	21.3			12.1	12.1		
Effective Green, g (s)	11.2	11.2	11.2	5.2	21.3			12.1	12.1		
Actuated g/C Ratio	0.28	0.28	0.28	0.13	0.53			0.30	0.30		
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0		
Lane Grp Cap (vph)	465	465	438	441	1861			1057	473		
v/s Ratio Prot	0.14	c0.14		c0.09	0.12			c0.13			
v/s Ratio Perm			0.05						0.06		
v/c Ratio	0.49	0.49	0.17	0.70	0.23			0.43	0.18		
Uniform Delay, d1	12.3	12.3	11.1	16.9	5.2			11.4	10.5		
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00	1.00		
Incremental Delay, d2	0.8	0.8	0.2	5.0	0.1			0.3	0.2		
Delay (s)	13.1	13.1	11.3	21.9	5.2			11.7	10.7		
Level of Service	B	B	B	C	A			B	B		
Approach Delay (s)		12.4			12.2			11.3		0.0	
Approach LOS		B			B			B		A	

Intersection Summary				
HCM Average Control Delay	12.0	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.51			
Actuated Cycle Length (s)	40.5	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	40.7%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

ALL-WAY STOP CONTROL ANALYSIS

General Information		Site Information	
Analyst	Jacob Swim	Intersection	Carmel Creek Rd./Del Mar Trail
Agency/Co.	USAI	Jurisdiction	City of San Diego
Date Performed	3/25/2011	Analysis Year	2011
Analysis Time Period	36 NT+P PM (Phase 1)		

Project ID 002407 - San Diego Corporate Center Lots

East/West Street: Del Mar Trail North/South Street: Carmel Creek Road

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	5	5	4	57	12	10
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	12	768	103	15	431	10
%Thrus Left Lane	50			50		

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		LTR		LT	TR	LT	TR
PHF	0.90		0.90		0.90	0.90	0.90	0.90
Flow Rate (veh/h)	14		87		439	540	254	251
% Heavy Vehicles	2		2		2	2	2	2
No. Lanes	1		1		2		2	
Geometry Group	2		2		5		5	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

	Eastbound		Westbound		Northbound		Southbound	
Prop. Left-Turns	0.4		0.7		0.0	0.0	0.1	0.0
Prop. Right-Turns	0.3		0.1		0.0	0.2	0.0	0.0
Prop. Heavy Vehicle	0.0		0.0		0.0	0.0	0.0	0.0
hLT-adj	0.2	0.2	0.2	0.2	0.5	0.5	0.5	0.5
hRT-adj	-0.6	-0.6	-0.6	-0.6	-0.7	-0.7	-0.7	-0.7
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	-0.1		0.1		0.0	-0.1	0.1	0.0

Departure Headway and Service Time

	Eastbound		Westbound		Northbound		Southbound	
hd, initial value (s)	3.20		3.20		3.20	3.20	3.20	3.20
x, initial	0.01		0.08		0.39	0.48	0.23	0.22
hd, final value (s)	6.74		6.62		5.52	5.36	6.08	6.01
x, final value	0.03		0.16		0.67	0.80	0.43	0.42
Move-up time, m (s)	2.0		2.0		2.3		2.3	
Service Time, t_s (s)	4.7		4.6		3.2	3.1	3.8	3.7

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	264		337		647	669	504	501
Delay (s/veh)	9.92		10.88		18.83	26.25	13.26	12.98
LOS	A		B		C	D	B	B
Approach: Delay (s/veh)	9.92		10.88		22.92		13.12	
LOS	A		B		C		B	
Intersection Delay (s/veh)	19.02							
Intersection LOS	C							

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	378	388	311	507	8	396	5	158	1	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.95	1.00		0.98	
Satd. Flow (prot)	1770	1863	1583	1770	1858			1775	1583		1750	
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.95	1.00		0.98	
Satd. Flow (perm)	1770	1863	1583	1770	1858			1775	1583		1750	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	2	420	431	346	563	9	440	6	176	1	1	1
RTOR Reduction (vph)	0	0	235	0	0	0	0	0	125	0	1	0
Lane Group Flow (vph)	2	420	196	346	572	0	0	446	51	0	2	0
Turn Type	Prot		Prot	Prot			Split		Prot	Split		
Protected Phases	7	4	4	3	8		2	2	2	6	6	
Permitted Phases												
Actuated Green, G (s)	0.8	25.8	25.8	19.6	44.6			25.5	25.5		1.1	
Effective Green, g (s)	0.8	25.8	25.8	19.6	44.6			25.5	25.5		1.1	
Actuated g/C Ratio	0.01	0.29	0.29	0.22	0.51			0.29	0.29		0.01	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	16	546	464	394	942			514	459		22	
v/s Ratio Prot	0.00	c0.23	0.12	c0.20	0.31			c0.25	0.03		c0.00	
v/s Ratio Perm												
v/c Ratio	0.12	0.77	0.42	0.88	0.61			0.87	0.11		0.09	
Uniform Delay, d1	43.3	28.4	25.1	33.0	15.5			29.6	22.9		43.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	3.5	6.5	0.6	19.3	1.1			14.4	0.1		1.8	
Delay (s)	46.8	34.8	25.7	52.3	16.6			44.0	23.0		44.8	
Level of Service	D	C	C	D	B			D	C		D	
Approach Delay (s)		30.3			30.0			38.1			44.8	
Approach LOS		C			C			D			D	

Intersection Summary				
HCM Average Control Delay	32.2	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.82			
Actuated Cycle Length (s)	88.0	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	76.0%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Volume (vph)	407	308	0	203	291	289	444
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00		1.00	1.00	1.00	0.95
Frt	1.00	0.85		1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00		1.00	1.00	0.95	1.00
Satd. Flow (prot)	3433	1583		1863	1583	1770	3539
Flt Permitted	0.95	1.00		1.00	1.00	0.95	1.00
Satd. Flow (perm)	3433	1583		1863	1583	1770	3539
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	452	342	0	226	323	321	493
RTOR Reduction (vph)	0	256	0	0	246	0	0
Lane Group Flow (vph)	452	86	0	226	77	321	493
Turn Type		Perm	Prot		Perm	Prot	
Protected Phases	1		3	8		7	
Permitted Phases		1			8		6
Actuated Green, G (s)	13.1	13.1		12.4	12.4	14.3	13.1
Effective Green, g (s)	13.1	13.1		12.4	12.4	14.3	13.1
Actuated g/C Ratio	0.25	0.25		0.24	0.24	0.28	0.25
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	868	400		446	379	489	895
v/s Ratio Prot	0.13			c0.12		c0.18	
v/s Ratio Perm		0.05			0.05		c0.14
v/c Ratio	0.52	0.22		0.51	0.20	0.66	0.55
Uniform Delay, d1	16.6	15.3		17.1	15.8	16.6	16.8
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.6	0.3		0.9	0.3	3.2	0.7
Delay (s)	17.2	15.6		18.0	16.0	19.7	17.5
Level of Service	B	B		B	B	B	B
Approach Delay (s)	16.5			16.8			18.4
Approach LOS	B			B			B

Intersection Summary				
HCM Average Control Delay	17.3	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.58			
Actuated Cycle Length (s)	51.8	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	48.3%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Volume (vph)	87	7	0	467	52	3	860
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0		4.0	4.0
Lane Util. Factor	0.97			0.95		1.00	0.95
Frt	0.99			0.98		1.00	1.00
Flt Protected	0.96			1.00		0.95	1.00
Satd. Flow (prot)	3415			3486		1770	3539
Flt Permitted	0.96			1.00		0.95	1.00
Satd. Flow (perm)	3415			3486		1770	3539
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	97	8	0	519	58	3	956
RTOR Reduction (vph)	7	0	0	13	0	0	0
Lane Group Flow (vph)	98	0	0	564	0	3	956
Turn Type			Prot			Prot	
Protected Phases	8		5	2		1	6
Permitted Phases							
Actuated Green, G (s)	3.2			15.3		0.6	19.9
Effective Green, g (s)	3.2			15.3		0.6	19.9
Actuated g/C Ratio	0.10			0.49		0.02	0.64
Clearance Time (s)	4.0			4.0		4.0	4.0
Vehicle Extension (s)	3.0			3.0		3.0	3.0
Lane Grp Cap (vph)	351			1715		34	2265
v/s Ratio Prot	c0.03			0.16		0.00	c0.27
v/s Ratio Perm							
v/c Ratio	0.28			0.33		0.09	0.42
Uniform Delay, d1	12.9			4.8		15.0	2.8
Progression Factor	1.00			1.00		1.00	1.00
Incremental Delay, d2	0.4			0.1		1.1	0.1
Delay (s)	13.3			4.9		16.1	2.9
Level of Service	B			A		B	A
Approach Delay (s)	13.3			4.9			2.9
Approach LOS	B			A			A

Intersection Summary			
HCM Average Control Delay	4.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	31.1	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	24	114	20	65	84	153	6	320	16	165	705	107
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	0.90		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1821		1770	1682		1770	3514		1770	3469	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1821		1770	1682		1770	3514		1770	3469	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	127	22	72	93	170	7	356	18	183	783	119
RTOR Reduction (vph)	0	11	0	0	113	0	0	6	0	0	17	0
Lane Group Flow (vph)	27	138	0	72	150	0	7	368	0	183	885	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	0.7	10.7		2.3	12.3		0.7	14.1		6.4	19.8	
Effective Green, g (s)	0.7	10.7		2.3	12.3		0.7	14.1		6.4	19.8	
Actuated g/C Ratio	0.01	0.22		0.05	0.25		0.01	0.28		0.13	0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	25	394		82	418		25	1001		229	1388	
v/s Ratio Prot	0.02	0.08		c0.04	c0.09		0.00	0.10		c0.10	c0.25	
v/s Ratio Perm												
v/c Ratio	1.08	0.35		0.88	0.36		0.28	0.37		0.80	0.64	
Uniform Delay, d1	24.4	16.5		23.5	15.3		24.2	14.1		20.9	12.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	205.9	0.5		59.9	0.5		6.0	0.2		17.5	1.0	
Delay (s)	230.3	17.0		83.3	15.9		30.2	14.4		38.4	12.9	
Level of Service	F	B		F	B		C	B		D	B	
Approach Delay (s)		49.7			30.4			14.7			17.2	
Approach LOS		D			C			B			B	

Intersection Summary			
HCM Average Control Delay	21.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	49.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	85	72	96	141	37	41	341	57	42	796	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.97		1.00	0.98		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1805		1770	3464		1770	3534	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1583	1770	1805		1770	3464		1770	3534	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	6	94	80	107	157	41	46	379	63	47	884	8
RTOR Reduction (vph)	0	0	65	0	17	0	0	20	0	0	1	0
Lane Group Flow (vph)	6	94	15	107	181	0	46	422	0	47	891	0
Turn Type	Prot		Prot	Prot			Prot			Prot		
Protected Phases	7	4	4	3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	0.6	8.7	8.7	3.5	11.6		1.4	18.2		1.4	18.2	
Effective Green, g (s)	0.6	8.7	8.7	3.5	11.6		1.4	18.2		1.4	18.2	
Actuated g/C Ratio	0.01	0.18	0.18	0.07	0.24		0.03	0.38		0.03	0.38	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	22	339	288	130	438		52	1319		52	1346	
v/s Ratio Prot	0.00	0.05	0.01	c0.06	c0.10		0.03	0.12		c0.03	c0.25	
v/s Ratio Perm												
v/c Ratio	0.27	0.28	0.05	0.82	0.41		0.88	0.32		0.90	0.66	
Uniform Delay, d1	23.4	16.8	16.1	21.8	15.2		23.1	10.4		23.1	12.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	6.6	0.4	0.1	32.6	0.6		82.7	0.1		89.2	1.2	
Delay (s)	30.0	17.3	16.2	54.4	15.9		105.8	10.6		112.4	13.5	
Level of Service	C	B	B	D	B		F	B		F	B	
Approach Delay (s)		17.2			29.4			19.6			18.4	
Approach LOS		B			C			B			B	

Intersection Summary				
HCM Average Control Delay	20.4	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.62			
Actuated Cycle Length (s)	47.8	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	47.5%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	96	883	24	92	884	205	70	58	88	461	23	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.95			1.00	1.00	0.95	0.95	
Frt	1.00	1.00		1.00	0.97			1.00	0.85	1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00	0.95	0.97	
Satd. Flow (prot)	1770	5065		1770	3439			1813	1583	1681	1639	
Flt Permitted	0.95	1.00		0.95	1.00			0.97	1.00	0.95	0.97	
Satd. Flow (perm)	1770	5065		1770	3439			1813	1583	1681	1639	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	107	981	27	102	982	228	78	64	98	512	26	93
RTOR Reduction (vph)	0	3	0	0	21	0	0	0	84	0	17	0
Lane Group Flow (vph)	107	1005	0	102	1189	0	0	142	14	323	291	0
Turn Type	Prot			Prot			Split		Prot	Split		
Protected Phases	7	4		3	8		2	2	2	6	6	
Permitted Phases												
Actuated Green, G (s)	6.6	30.7		8.2	32.3			11.9	11.9	18.4	18.4	
Effective Green, g (s)	6.6	30.7		8.2	32.3			11.9	11.9	18.4	18.4	
Actuated g/C Ratio	0.08	0.36		0.10	0.38			0.14	0.14	0.22	0.22	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	137	1825		170	1304			253	221	363	354	
v/s Ratio Prot	c0.06	0.20		0.06	c0.35			c0.08	0.01	c0.19	0.18	
v/s Ratio Perm												
v/c Ratio	0.78	0.55		0.60	0.91			0.56	0.06	0.89	0.82	
Uniform Delay, d1	38.6	21.7		36.9	25.1			34.2	31.8	32.4	31.8	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2	24.5	0.4		5.8	9.8			2.8	0.1	22.3	14.2	
Delay (s)	63.1	22.1		42.8	34.9			37.0	31.9	54.7	46.0	
Level of Service	E	C		D	C			D	C	D	D	
Approach Delay (s)		26.0			35.5			35.0			50.5	
Approach LOS		C			D			C			D	

Intersection Summary				
HCM Average Control Delay	35.1	HCM Level of Service	D	
HCM Volume to Capacity ratio	0.79			
Actuated Cycle Length (s)	85.2	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	68.9%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑			↑↑		↱
Volume (veh/h)	1444	55	0	1400	0	138
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	1604	61	0	1556	0	153
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	575			607		
pX, platoon unblocked			0.86		0.86	0.86
vC, conflicting volume			1666		2413	565
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1207		2075	0
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	84
cM capacity (veh/h)			494		40	933

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1
Volume Total	642	642	382	778	778	153
Volume Left	0	0	0	0	0	0
Volume Right	0	0	61	0	0	153
cSH	1700	1700	1700	1700	1700	933
Volume to Capacity	0.38	0.38	0.22	0.46	0.46	0.16
Queue Length 95th (ft)	0	0	0	0	0	15
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	9.6
Lane LOS						A
Approach Delay (s)	0.0			0.0		9.6
Approach LOS						A

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	44.3%	ICU Level of Service	A
Analysis Period (min)	15		

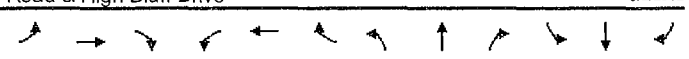
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↰↑↑	↱
Volume (vph)	0	796	1056	0	1010	336
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		0.97	0.91
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3539	3539		3430	1441
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3539	3539		3430	1441
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	884	1173	0	1122	373
RTOR Reduction (vph)	0	0	0	0	5	13
Lane Group Flow (vph)	0	884	1173	0	1154	323
Turn Type						Prot
Protected Phases		4	8		6	6
Permitted Phases						
Actuated Green, G (s)		18.0	18.0		17.8	17.8
Effective Green, g (s)		18.0	18.0		17.8	17.8
Actuated g/C Ratio		0.41	0.41		0.41	0.41
Clearance Time (s)		4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1454	1454		1394	586
v/s Ratio Prot		0.25	c0.33		c0.34	0.22
v/s Ratio Perm						
v/c Ratio		0.61	0.81		0.83	0.55
Uniform Delay, d1		10.1	11.4		11.6	9.9
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		0.7	3.4		4.2	1.1
Delay (s)		10.9	14.7		15.8	11.1
Level of Service		B	B		B	B
Approach Delay (s)		10.9	14.7		14.7	
Approach LOS		B	B		B	

Intersection Summary			
HCM Average Control Delay	13.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	43.8	Sum of lost time (s)	8.0
Intersection Capacity Utilization	120.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	231	1495	0	0	1552	944	384	59	1080	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	0.97	0.95			0.91	1.00	0.95	0.91	0.95			
Frt	1.00	1.00			1.00	0.85	1.00	0.87	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (prot)	3433	3539			5085	1583	1681	1478	1504			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (perm)	3433	3539			5085	1583	1681	1478	1504			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	257	1661	0	0	1724	1049	427	66	1200	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	492	0	5	5	0	0	0
Lane Group Flow (vph)	257	1661	0	0	1724	557	384	656	643	0	0	0
Turn Type	Prot					Prot	Prot		Prot			
Protected Phases	7	4			8	8	5	2	2			
Permitted Phases												
Actuated Green, G (s)	7.0	43.0			32.0	32.0	39.0	39.0	39.0			
Effective Green, g (s)	7.0	43.0			32.0	32.0	39.0	39.0	39.0			
Actuated g/C Ratio	0.08	0.48			0.36	0.36	0.43	0.43	0.43			
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0			
Lane Grp Cap (vph)	267	1691			1808	563	728	640	652			
v/s Ratio Prot	0.07	c0.47			0.34	0.35	0.23	c0.44	0.43			
v/s Ratio Perm												
v/c Ratio	0.96	0.98			0.95	0.99	0.53	1.02	0.99			
Uniform Delay, d1	41.4	23.1			28.3	28.8	18.7	25.5	25.2			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	44.5	17.7			12.0	34.7	0.7	42.0	31.4			
Delay (s)	85.9	40.8			40.2	63.5	19.4	67.5	56.7			
Level of Service	F	D			D	E	B	E	E			
Approach Delay (s)		46.9			49.0			52.5			0.0	
Approach LOS		D			D			D			A	

Intersection Summary				
HCM Average Control Delay	49.3	HCM Level of Service	D	
HCM Volume to Capacity ratio	1.00			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	98.3%	ICU Level of Service	F	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	111	1760	694	103	1973	69	201	10	41	109	59	312
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		0.97	0.95		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.88		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5059		3433	3111		1770	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5059		3433	3111		1770	1863	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	123	1956	771	114	2192	77	223	11	46	121	66	347
RTOR Reduction (vph)	0	0	375	0	4	0	0	39	0	0	0	128
Lane Group Flow (vph)	123	1956	396	114	2265	0	223	18	0	121	66	219
Turn Type	Prot		Perm	Prot			Prot			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									6
Actuated Green, G (s)	7.6	40.1	40.1	8.6	41.1		7.0	13.1		9.9	16.0	16.0
Effective Green, g (s)	7.6	40.1	40.1	8.6	41.1		7.0	13.1		9.9	16.0	16.0
Actuated g/C Ratio	0.09	0.46	0.46	0.10	0.47		0.08	0.15		0.11	0.18	0.18
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	153	2325	724	174	2371		274	465		200	340	289
v/s Ratio Prot	c0.07	0.38		0.06	c0.45		c0.06	0.01		0.07	0.04	
v/s Ratio Perm			0.25									c0.14
v/c Ratio	0.80	0.84	0.55	0.66	0.96		0.81	0.04		0.60	0.19	0.76
Uniform Delay, d1	39.3	21.0	17.2	38.1	22.4		39.7	31.9		37.0	30.4	34.0
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	25.5	2.9	0.8	8.6	10.0		16.7	0.0		5.1	0.3	10.8
Delay (s)	64.8	23.9	18.1	46.7	32.4		56.4	31.9		42.1	30.7	44.8
Level of Service	E	C	B	D	C		E	C		D	C	D
Approach Delay (s)		24.1			33.1			51.4			42.4	
Approach LOS		C			C			D			D	

Intersection Summary				
HCM Average Control Delay	30.5	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.83			
Actuated Cycle Length (s)	87.7	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	74.7%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↱	↰↰	↑↑↑	↰↰	↱
Volume (vph)	1938	166	129	2127	50	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	5085	1583	1770	5085	3433	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	5085	1583	1770	5085	3433	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	2153	184	143	2363	56	43
RTOR Reduction (vph)	0	72	0	0	0	40
Lane Group Flow (vph)	2153	112	143	2363	56	3
Turn Type		Prot	Prot			Prot
Protected Phases	4	4	3	8	2	2
Permitted Phases						
Actuated Green, G (s)	33.5	33.5	6.0	43.5	3.7	3.7
Effective Green, g (s)	33.5	33.5	6.0	43.5	3.7	3.7
Actuated g/C Ratio	0.61	0.61	0.11	0.79	0.07	0.07
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	3086	961	192	4007	230	106
v/s Ratio Prot	c0.42	0.07	c0.08	0.46	c0.02	0.00
v/s Ratio Perm						
v/c Ratio	0.70	0.12	0.74	0.59	0.24	0.03
Uniform Delay, d1	7.4	4.6	23.9	2.3	24.4	24.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.7	0.1	14.5	0.2	0.6	0.1
Delay (s)	8.1	4.6	38.3	2.5	25.0	24.2
Level of Service	A	A	D	A	C	C
Approach Delay (s)	7.8			4.6	24.6	
Approach LOS	A			A	C	

Intersection Summary				
HCM Average Control Delay	6.5	HCM Level of Service	A	
HCM Volume to Capacity ratio	0.67			
Actuated Cycle Length (s)	55.2	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	57.9%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↱	↰↰	↑↑↑	↰	↱
Volume (vph)	1839	138	138	2214	42	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	0.97	0.91	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	5085	1583	3433	5085	1770	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	5085	1583	3433	5085	1770	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	2043	153	153	2460	47	47
RTOR Reduction (vph)	0	62	0	0	0	43
Lane Group Flow (vph)	2043	91	153	2460	47	4
Turn Type		Prot	Prot			Prot
Protected Phases	4	4	3	8	2	2
Permitted Phases						
Actuated Green, G (s)	28.4	28.4	3.5	35.9	4.1	4.1
Effective Green, g (s)	28.4	28.4	3.5	35.9	4.1	4.1
Actuated g/C Ratio	0.59	0.59	0.07	0.75	0.09	0.09
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	3009	937	250	3803	151	135
v/s Ratio Prot	0.40	0.06	0.04	c0.48	c0.03	0.00
v/s Ratio Perm						
v/c Ratio	0.68	0.10	0.61	0.65	0.31	0.03
Uniform Delay, d1	6.7	4.2	21.6	3.0	20.6	20.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.6	0.0	4.4	0.4	1.2	0.1
Delay (s)	7.3	4.3	26.0	3.3	21.8	20.2
Level of Service	A	A	C	A	C	C
Approach Delay (s)	7.1			4.7	21.0	
Approach LOS	A			A	C	

Intersection Summary				
HCM Average Control Delay	6.1	HCM Level of Service	A	
HCM Volume to Capacity ratio	0.61			
Actuated Cycle Length (s)	48.0	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	52.8%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	231	963	498	261	1592	95	284	110	90	164	330	454
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.91		0.97	0.91		0.97	0.91	1.00	0.97	0.91	
Frt	1.00	0.95		1.00	0.99		1.00	1.00	0.85	1.00	0.91	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	4825		3433	5042		3433	5085	1583	3433	4644	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3433	4825		3433	5042		3433	5085	1583	3433	4644	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	257	1070	553	290	1769	106	316	122	100	182	367	504
RTOR Reduction (vph)	0	102	0	0	7	0	0	0	78	0	153	0
Lane Group Flow (vph)	257	1521	0	290	1868	0	316	122	22	182	718	0
Turn Type	Prot			Prot			Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Actuated Green, G (s)	8.9	33.8		10.2	35.1		10.0	19.7	19.7	8.8	18.5	
Effective Green, g (s)	8.9	33.8		10.2	35.1		10.0	19.7	19.7	8.8	18.5	
Actuated g/C Ratio	0.10	0.38		0.12	0.40		0.11	0.22	0.22	0.10	0.21	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	345	1843		396	2000		388	1132	352	341	971	
v/s Ratio Prot	0.07	0.32		c0.08	c0.37		c0.09	0.02		0.05	c0.15	
v/s Ratio Perm									0.01			
v/c Ratio	0.74	0.83		0.73	0.93		0.81	0.11	0.06	0.53	1.04dr	
Uniform Delay, d1	38.7	24.7		37.8	25.6		38.3	27.4	27.1	37.9	32.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	8.5	3.2		6.8	8.7		12.3	0.0	0.1	1.6	3.0	
Delay (s)	47.2	27.8		44.7	34.3		50.7	27.4	27.2	39.5	35.7	
Level of Service	D	C		D	C		D	C	C	D	D	
Approach Delay (s)		30.5			35.7			41.1			36.4	
Approach LOS		C			D			D			D	

Intersection Summary				
HCM Average Control Delay	34.6	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.81			
Actuated Cycle Length (s)	88.5	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	77.5%	ICU Level of Service	D	
Analysis Period (min)	15			

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	153	645	303	280	1261	174	438	188	111	146	185	154
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	0.97	0.91		0.97	0.91		0.97	0.91		1.00	0.95	
Frt	1.00	0.95		1.00	0.98		1.00	0.94		1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	4841		3433	4993		3433	4803		1770	3298	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	4841		3433	4993		3433	4803		1770	3298	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	170	717	337	311	1401	193	487	209	123	162	206	171
RTOR Reduction (vph)	0	108	0	0	22	0	0	100	0	0	136	0
Lane Group Flow (vph)	170	946	0	311	1572	0	487	232	0	162	241	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	5.0	20.2		9.2	24.4		12.0	12.5		9.6	10.1	
Effective Green, g (s)	5.0	20.2		9.2	24.4		12.0	12.5		9.6	10.1	
Actuated g/C Ratio	0.07	0.30		0.14	0.36		0.18	0.19		0.14	0.15	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	254	1449		468	1805		610	889		252	493	
v/s Ratio Prot	0.05	0.20		c0.09	c0.31		c0.14	0.05		0.09	c0.07	
v/s Ratio Perm												
v/c Ratio	0.67	0.65		0.66	0.87		0.80	0.26		0.64	0.49	
Uniform Delay, d1	30.4	20.6		27.7	20.1		26.6	23.5		27.3	26.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	6.5	1.1		3.5	4.9		7.2	0.2		5.5	0.8	
Delay (s)	37.0	21.7		31.2	25.0		33.8	23.7		32.9	27.1	
Level of Service	D	C		C	C		C	C		C	C	
Approach Delay (s)		23.8			26.0			29.7			28.8	
Approach LOS		C			C			C			C	

Intersection Summary				
HCM Average Control Delay	26.4	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.71			
Actuated Cycle Length (s)	67.5	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	68.5%	ICU Level of Service	C	
Analysis Period (min)	15			

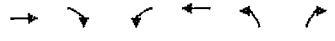
c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	212	663	126	81	1106	216	116	156	11	56	62	129
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.99		1.00	0.90	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	4964		1770	4961		1770	1845		1770	1674	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	4964		1770	4961		1770	1845		1770	1674	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	236	737	140	90	1229	240	129	173	12	62	69	143
RTOR Reduction (vph)	0	31	0	0	34	0	0	3	0	0	102	0
Lane Group Flow (vph)	236	846	0	90	1435	0	129	182	0	62	110	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	12.4	30.5		6.9	25.0		7.8	16.1		4.0	12.3	
Effective Green, g (s)	12.4	30.5		6.9	25.0		7.8	16.1		4.0	12.3	
Actuated g/C Ratio	0.17	0.41		0.09	0.34		0.11	0.22		0.05	0.17	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	299	2060		166	1687		188	404		96	280	
v/s Ratio Prot	c0.13	0.17		0.05	c0.29		c0.07	c0.10		0.04	0.07	
v/s Ratio Perm												
v/c Ratio	0.79	0.41		0.54	0.85		0.69	0.45		0.65	0.39	
Uniform Delay, d1	29.3	15.2		31.8	22.5		31.7	24.9		34.1	27.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	12.9	0.1		3.6	4.3		9.9	0.8		14.0	0.9	
Delay (s)	42.2	15.3		35.4	26.8		41.6	25.7		48.0	28.2	
Level of Service	D	B		D	C		D	C		D	C	
Approach Delay (s)		21.0			27.3			32.2			32.7	
Approach LOS		C			C			C			C	

Intersection Summary				
HCM Average Control Delay	26.1	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.73			
Actuated Cycle Length (s)	73.5	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	68.9%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

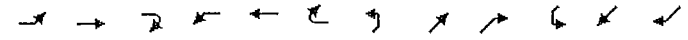
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	160	576	35	67	1146	36	44	26	55	49	60	362
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	1.00		1.00	0.90		1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5041		1770	5062		1770	1673		1770	1623	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	5041		1770	5062		1770	1673		1770	1623	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	178	640	39	74	1273	40	49	29	61	54	67	402
RTOR Reduction (vph)	0	9	0	0	5	0	0	50	0	0	262	0
Lane Group Flow (vph)	178	670	0	74	1308	0	49	40	0	54	207	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	8.2	24.9		3.7	20.4		2.4	10.8		3.2	11.6	
Effective Green, g (s)	8.2	24.9		3.7	20.4		2.4	10.8		3.2	11.6	
Actuated g/C Ratio	0.14	0.42		0.06	0.35		0.04	0.18		0.05	0.20	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	248	2142		112	1762		72	308		97	321	
v/s Ratio Prot	c0.10	0.13		0.04	c0.26		0.03	0.02		c0.03	c0.13	
v/s Ratio Perm												
v/c Ratio	0.72	0.31		0.66	0.74		0.68	0.13		0.56	0.64	
Uniform Delay, d1	24.1	11.2		26.8	16.8		27.7	20.0		27.0	21.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	9.5	0.1		13.7	1.7		23.3	0.2		6.8	4.4	
Delay (s)	33.6	11.3		40.5	18.5		51.0	20.2		33.8	26.0	
Level of Service	C	B		D	B		D	C		C	C	
Approach Delay (s)		15.9			19.7			31.0			26.8	
Approach LOS		B			B			C			C	

Intersection Summary				
HCM Average Control Delay	20.4	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.65			
Actuated Cycle Length (s)	58.6	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	74.0%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	567	129	397	1024	274	342
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.91		1.00	0.91	0.97	1.00
Frt	0.97		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	4944		1770	5085	3433	1583
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	4944		1770	5085	3433	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	630	143	441	1138	304	380
RTOR Reduction (vph)	56	0	0	0	0	304
Lane Group Flow (vph)	717	0	441	1138	304	76
Turn Type			Prot			Prot
Protected Phases	4		3	8	2	2
Permitted Phases						
Actuated Green, G (s)	14.4		17.5	35.9	10.9	10.9
Effective Green, g (s)	14.4		17.5	35.9	10.9	10.9
Actuated g/C Ratio	0.26		0.32	0.66	0.20	0.20
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1299		565	3331	683	315
v/s Ratio Prot	c0.15		c0.25	0.22	c0.09	0.05
v/s Ratio Perm						
v/c Ratio	0.55		0.78	0.34	0.45	0.24
Uniform Delay, d1	17.4		16.9	4.2	19.3	18.5
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5		6.9	0.1	0.5	0.4
Delay (s)	17.9		23.8	4.3	19.8	18.9
Level of Service	B		C	A	B	B
Approach Delay (s)	17.9			9.7	19.3	
Approach LOS	B			A	B	

Intersection Summary			
HCM Average Control Delay	14.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	54.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	53.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	42	8	8	97	28	110	138	343	101	173	858	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95			1.00	1.00	0.97	0.91		0.97	0.91	
Frt	1.00	0.96			1.00	0.85	1.00	0.97		1.00	0.99	
Flt Protected	0.95	0.98			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1681	1659			1793	1583	3433	4912		3433	5039	
Flt Permitted	0.95	0.98			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1681	1659			1793	1583	3433	4912		3433	5039	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	47	9	9	108	31	122	153	381	112	192	953	61
RTOR Reduction (vph)	0	8	0	0	0	78	0	71	0	0	10	0
Lane Group Flow (vph)	33	24	0	0	139	44	153	422	0	192	1004	0
Turn Type	Split			Split		custom	Prot			Prot		
Protected Phases	2	2		6	6		3	8		7	4	
Permitted Phases						8						
Actuated Green, G (s)	2.6	2.6			6.9	16.7	3.5	16.7		3.8	17.0	
Effective Green, g (s)	2.6	2.6			6.9	16.7	3.5	16.7		3.8	17.0	
Actuated g/C Ratio	0.06	0.06			0.15	0.36	0.08	0.36		0.08	0.37	
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	95	94			269	575	261	1783		284	1862	
v/s Ratio Prot	c0.02	0.01			c0.08		0.04	0.09		c0.06	c0.20	
v/s Ratio Perm						0.03						
v/c Ratio	0.35	0.25			0.52	0.08	0.59	0.24		0.68	0.54	
Uniform Delay, d1	20.9	20.8			18.0	9.6	20.5	10.2		20.5	11.4	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.2	1.4			1.7	0.1	3.3	0.1		6.2	0.3	
Delay (s)	23.1	22.2			19.7	9.7	23.9	10.3		26.7	11.7	
Level of Service	C	C			B	A	C	B		C	B	
Approach Delay (s)		22.6			15.0			13.5			14.1	
Approach LOS		C			B			B			B	

Intersection Summary					
HCM Average Control Delay	14.3	HCM Level of Service		B	
HCM Volume to Capacity ratio	0.48				
Actuated Cycle Length (s)	46.0	Sum of lost time (s)		12.0	
Intersection Capacity Utilization	45.2%	ICU Level of Service		A	
Analysis Period (min)	15				
c Critical Lane Group					

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	173	85	116	46	195	153	114	449	7	103	468	173
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.93		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1740		1770	3531		1770	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	1863	1583	1770	1740		1770	3531		1770	3539	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	192	94	129	51	217	170	127	499	8	114	520	192
RTOR Reduction (vph)	0	0	79	0	36	0	0	2	0	0	0	149
Lane Group Flow (vph)	192	94	50	51	351	0	127	505	0	114	520	43
Turn Type	Prot		Prot	Prot			Prot			Prot		Prot
Protected Phases	7	4	4	3	8		5	2		1	6	6
Permitted Phases												
Actuated Green, G (s)	12.2	26.8	26.8	3.6	18.2		7.1	16.5		6.1	15.5	15.5
Effective Green, g (s)	12.2	26.8	26.8	3.6	18.2		7.1	16.5		6.1	15.5	15.5
Actuated g/C Ratio	0.18	0.39	0.39	0.05	0.26		0.10	0.24		0.09	0.22	0.22
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	313	724	615	92	459		182	844		156	795	356
v/s Ratio Prot	c0.11	0.05	0.03	0.03	c0.20		c0.07	0.14		0.06	c0.15	0.03
v/s Ratio Perm												
v/c Ratio	0.61	0.13	0.08	0.55	0.76		0.70	0.60		0.73	0.65	0.12
Uniform Delay, d1	26.2	13.6	13.3	31.9	23.4		29.9	23.3		30.6	24.3	21.3
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	3.5	0.1	0.1	7.1	7.4		11.1	1.2		16.1	1.9	0.2
Delay (s)	29.8	13.7	13.4	39.0	30.8		41.0	24.5		46.7	26.3	21.5
Level of Service	C	B	B	D	C		D	C		D	C	C
Approach Delay (s)		21.0			31.8			27.8			28.0	
Approach LOS		C			C			C			C	

Intersection Summary				
HCM Average Control Delay	27.4	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.69			
Actuated Cycle Length (s)	69.0	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	61.8%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	63	70	6	233	52	144	104	331	54	155	575	193
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.91		1.00	0.91	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1840		1770	1863	1583	1770	4978		1770	4894	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1840		1770	1863	1583	1770	4978		1770	4894	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	70	78	7	259	58	160	116	368	60	172	639	214
RTOR Reduction (vph)	0	5	0	0	0	119	0	31	0	0	80	0
Lane Group Flow (vph)	70	80	0	259	58	41	116	397	0	172	773	0
Turn Type	Prot			Prot		Prot	Prot			Prot		
Protected Phases	1	6		5	2	2	7	4		3	8	
Permitted Phases												
Actuated Green, G (s)	3.8	7.1		11.7	15.0	15.0	5.4	14.8		8.4	17.8	
Effective Green, g (s)	3.8	7.1		11.7	15.0	15.0	5.4	14.8		8.4	17.8	
Actuated g/C Ratio	0.07	0.12		0.20	0.26	0.26	0.09	0.26		0.14	0.31	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	116	225		357	482	409	165	1270		256	1502	
v/s Ratio Prot	0.04	c0.04		c0.15	0.03	0.03	0.07	0.08		c0.10	c0.16	
v/s Ratio Perm												
v/c Ratio	0.60	0.35		0.73	0.12	0.10	0.70	0.31		0.67	0.51	
Uniform Delay, d1	26.4	23.3		21.6	16.5	16.4	25.5	17.5		23.5	16.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	8.6	1.0		7.2	0.1	0.1	12.7	0.1		6.8	0.3	
Delay (s)	34.9	24.3		28.8	16.6	16.5	38.3	17.6		30.3	16.8	
Level of Service	C	C		C	B	B	D	B		C	B	
Approach Delay (s)		29.1			23.2			22.0			19.1	
Approach LOS		C			C			C			B	

Intersection Summary				
HCM Average Control Delay	21.4	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.59			
Actuated Cycle Length (s)	58.0	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	50.8%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	315	122	127	62	300	30	277	429	29	68	418	401
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85		0.99		1.00	0.99		1.00	0.93	
Flt Protected	0.95	1.00	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583		1829		1770	3505		1770	3279	
Flt Permitted	0.95	1.00	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1583		1829		1770	3505		1770	3279	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	332	128	134	65	316	32	292	452	31	72	440	422
RTOR Reduction (vph)	0	0	108	0	3	0	0	5	0	0	192	0
Lane Group Flow (vph)	332	128	26	0	410	0	292	478	0	72	670	0
Turn Type	Split		Prot	Split			Prot			Prot		
Protected Phases	4	4	4	8	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	17.5	17.5	17.5		20.0		15.4	29.7		7.0	21.3	
Effective Green, g (s)	17.5	17.5	17.5		20.0		15.4	29.7		7.0	21.3	
Actuated g/C Ratio	0.19	0.19	0.19		0.22		0.17	0.33		0.08	0.24	
Clearance Time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	343	361	307		406		302	1154		137	774	
v/s Ratio Prot	c0.19	0.07	0.02		c0.22		c0.17	0.14		0.04	c0.20	
v/s Ratio Perm												
v/c Ratio	0.97	0.35	0.08		1.01		0.97	0.41		0.53	0.87	
Uniform Delay, d1	36.1	31.5	29.8		35.1		37.1	23.5		40.0	33.1	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	39.6	0.6	0.1		47.1		42.4	0.2		3.6	10.0	
Delay (s)	75.7	32.1	29.9		82.2		79.5	23.7		43.6	43.1	
Level of Service	E	C	C		F		E	C		D	D	
Approach Delay (s)		55.9			82.2			44.8			43.1	
Approach LOS		E			F			D			D	

Intersection Summary				
HCM Average Control Delay	52.3	HCM Level of Service	D	
HCM Volume to Capacity ratio	0.95			
Actuated Cycle Length (s)	90.2	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	91.6%	ICU Level of Service	F	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBR	EBR2	NWL2	NWL	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	31	113	252	97	228	102	218	422	30	81	921	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.97		0.97	0.91		1.00	0.91	
Frt	1.00	0.85	0.85	1.00	0.95		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1583	1583	1770	3331		3433	5035		1770	5004	
Flt Permitted	0.95	1.00	1.00	0.95	0.97		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1583	1583	1770	3331		3433	5035		1770	5004	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	34	126	280	108	253	113	242	469	33	90	1023	122
RTOR Reduction (vph)	0	0	199	0	88	0	0	12	0	0	23	0
Lane Group Flow (vph)	34	126	81	108	278	0	242	490	0	90	1122	0
Turn Type		Perm	Perm	Split			Prot			Prot		
Protected Phases	2			6	6		3	8		7	4	
Permitted Phases		2	2									
Actuated Green, G (s)	9.6	9.6	9.6	5.8	5.8		5.0	18.7		3.5	17.2	
Effective Green, g (s)	9.6	9.6	9.6	5.8	5.8		5.0	18.7		3.5	17.2	
Actuated g/C Ratio	0.18	0.18	0.18	0.11	0.11		0.09	0.35		0.07	0.32	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	317	284	284	192	360		320	1757		116	1606	
v/s Ratio Prot	0.02			0.06	c0.08		c0.07	0.10		0.05	c0.22	
v/s Ratio Perm		c0.08	0.05									
v/c Ratio	0.11	0.44	0.29	0.56	0.77		0.76	0.28		0.78	0.70	
Uniform Delay, d1	18.4	19.6	19.0	22.7	23.3		23.7	12.6		24.7	15.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	1.1	0.6	3.7	9.8		9.8	0.1		27.0	1.3	
Delay (s)	18.6	20.7	19.6	26.4	33.1		33.5	12.7		51.7	17.3	
Level of Service	B	C	B	C	C		C	B		D	B	
Approach Delay (s)	19.8				31.6			19.4			19.8	
Approach LOS	B				C			B			B	

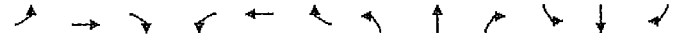
Intersection Summary				
HCM Average Control Delay	21.6	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.65			
Actuated Cycle Length (s)	53.6	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	52.8%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	51	6	73	13	27	14	126	31	2	3	16	198
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	57	7	81	14	30	16	140	34	2	3	18	220

Direction, Lane #	SE 1	SE 2	NW 1	NE 1	SW 1
Volume Total (vph)	63	81	60	177	241
Volume Left (vph)	57	0	14	140	3
Volume Right (vph)	0	81	16	2	220
Hadj (s)	0.48	-0.67	-0.07	0.18	-0.51
Departure Headway (s)	6.0	4.9	5.1	4.9	4.1
Degree Utilization, x	0.11	0.11	0.09	0.24	0.28
Capacity (veh/h)	555	682	635	701	820
Control Delay (s)	8.5	7.3	8.6	9.4	8.7
Approach Delay (s)	7.8		8.6	9.4	8.7
Approach LOS	A		A	A	A

Intersection Summary				
Delay	8.7			
HCM Level of Service	A			
Intersection Capacity Utilization	41.6%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	54	92	119	205	63	25	31	300	83	15	787	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85		0.99		1.00	0.97		1.00	0.98	
Flt Protected		0.98	1.00		0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1829	1583		1779		1770	3424		1770	3457	
Flt Permitted		0.98	1.00		0.97		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1829	1583		1779		1770	3424		1770	3457	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	60	102	132	228	70	28	34	333	92	17	874	160
RTOR Reduction (vph)	0	0	110	0	4	0	0	29	0	0	18	0
Lane Group Flow (vph)	0	162	22	0	322	0	34	396	0	17	1016	0
Turn Type	Split		Prot	Split			Prot			Prot		
Protected Phases	4	4	4	8	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)		11.5	11.5		15.9		1.6	26.2		0.8	25.4	
Effective Green, g (s)		11.5	11.5		15.9		1.6	26.2		0.8	25.4	
Actuated g/C Ratio		0.16	0.16		0.23		0.02	0.37		0.01	0.36	
Clearance Time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		299	259		402		40	1274		20	1247	
v/s Ratio Prot		c0.09	0.01		c0.18		c0.02	0.12		0.01	c0.29	
v/s Ratio Perm												
v/c Ratio		0.54	0.08		0.80		0.85	0.31		0.85	0.81	
Uniform Delay, d1		27.0	25.0		25.8		34.3	15.7		34.7	20.4	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		2.0	0.1		10.9		85.5	0.1		131.5	4.2	
Delay (s)		29.0	25.1		36.7		119.8	15.8		166.2	24.6	
Level of Service		C	C		D		F	B		F	C	
Approach Delay (s)		27.3			36.7			23.5			26.9	
Approach LOS		C			D			C			C	

Intersection Summary				
HCM Average Control Delay	27.7	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.75			
Actuated Cycle Length (s)	70.4	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	59.9%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	324	181	405	644	0	0	0	0	1081	3	148
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		0.97	0.95					0.95	0.91	0.95
Frt		0.95		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.95	1.00
Satd. Flow (prot)		3349		3433	3539					1681	1610	1504
Flt Permitted		1.00		0.95	1.00					0.95	0.95	1.00
Satd. Flow (perm)		3349		3433	3539					1681	1610	1504
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	360	201	450	716	0	0	0	0	1201	3	164
RTOR Reduction (vph)	0	114	0	0	0	0	0	0	0	0	1	73
Lane Group Flow (vph)	0	447	0	450	716	0	0	0	0	613	606	75
Turn Type				Prot						Prot		Prot
Protected Phases		4		3	8					1	6	6
Permitted Phases												
Actuated Green, G (s)		13.9		10.9	28.8					30.6	30.6	30.6
Effective Green, g (s)		13.9		10.9	28.8					30.6	30.6	30.6
Actuated g/C Ratio		0.21		0.16	0.43					0.45	0.45	0.45
Clearance Time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		691		555	1512					763	731	683
v/s Ratio Prot		c0.13		c0.13	0.20					0.36	c0.38	0.05
v/s Ratio Perm												
v/c Ratio		0.65		0.81	0.47					0.80	0.83	0.11
Uniform Delay, d1		24.5		27.3	13.9					15.8	16.1	10.6
Progression Factor		1.00		1.00	1.00					1.00	1.00	1.00
Incremental Delay, d2		2.1		8.8	0.2					6.1	7.7	0.1
Delay (s)		26.6		36.0	14.1					21.9	23.8	10.6
Level of Service		C		D	B					C	C	B
Approach Delay (s)		26.6			22.6			0.0			21.6	
Approach LOS		C			C			A			C	

Intersection Summary				
HCM Average Control Delay	22.8	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.78			
Actuated Cycle Length (s)	67.4	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	115.1%	ICU Level of Service	H	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	63	1270	0	0	977	879	109	2	570	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	0.97	0.95			0.95	1.00	0.95	0.91	0.95			
Frt	1.00	1.00			1.00	0.85	1.00	0.86	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (prot)	3433	3539			3539	1583	1681	1449	1504			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (perm)	3433	3539			3539	1583	1681	1449	1504			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	70	1411	0	0	1086	977	121	2	633	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	494	0	31	31	0	0	0
Lane Group Flow (vph)	70	1411	0	0	1086	483	109	293	292	0	0	0
Turn Type	Prot					Prot	Prot		Prot			
Protected Phases	7	4			8	8	5	2	2			
Permitted Phases												
Actuated Green, G (s)	2.5	33.2			26.7	26.7	16.6	16.6	16.6			
Effective Green, g (s)	2.5	33.2			26.7	26.7	16.6	16.6	16.6			
Actuated g/C Ratio	0.04	0.57			0.46	0.46	0.29	0.29	0.29			
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0			
Lane Grp Cap (vph)	148	2033			1635	731	483	416	432			
v/s Ratio Prot	0.02	c0.40			0.31	0.30	0.06	c0.20	0.19			
v/s Ratio Perm												
v/c Ratio	0.47	0.69			0.66	0.66	0.23	0.70	0.68			
Uniform Delay, d1	27.0	8.7			12.1	12.0	15.7	18.4	18.2			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	2.4	1.0			1.0	2.2	0.2	5.3	4.1			
Delay (s)	29.4	9.7			13.1	14.3	15.9	23.7	22.4			
Level of Service	C	A			B	B	B	C	C			
Approach Delay (s)		10.7			13.7			22.0			0.0	
Approach LOS		B			B			C			A	

Intersection Summary				
HCM Average Control Delay	14.1	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.70			
Actuated Cycle Length (s)	57.8	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	115.1%	ICU Level of Service	H	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	36	13	44	725	19	165	90	1034	149	122	1117	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.95	0.91	0.95	0.95	0.91	0.95	1.00	0.91		1.00	0.91	
Frt	1.00	0.93	0.85	1.00	0.99	0.85	1.00	0.98		1.00	1.00	
Flt Protected	0.95	0.99	1.00	0.95	0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1681	1563	1504	1681	1611	1504	1770	4989		1770	5067	
Flt Permitted	0.95	0.99	1.00	0.95	0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1681	1563	1504	1681	1611	1504	1770	4989		1770	5067	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	40	14	49	806	21	183	100	1149	166	136	1241	31
RTOR Reduction (vph)	0	16	30	0	1	115	0	17	0	0	2	0
Lane Group Flow (vph)	36	19	2	419	425	50	100	1298	0	136	1270	0
Turn Type	Split		Prot	Split		Prot	Prot			Prot		
Protected Phases	4	4	4	8	8	8	5	2		1		
Permitted Phases											6	
Actuated Green, G (s)	6.2	6.2	6.2	28.0	28.0	28.0	7.0	30.3		12.1	35.4	
Effective Green, g (s)	6.2	6.2	6.2	28.0	28.0	28.0	7.0	30.3		12.1	35.4	
Actuated g/C Ratio	0.07	0.07	0.07	0.30	0.30	0.30	0.08	0.33		0.13	0.38	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	113	105	101	508	487	455	134	1632		231	1937	
v/s Ratio Prot	c0.02	0.01	0.00	0.25	c0.26	0.03	c0.06	c0.26		c0.08		
v/s Ratio Perm											0.25	
v/c Ratio	0.32	0.18	0.02	0.82	0.87	0.11	0.75	0.80		0.59	0.66	
Uniform Delay, d1	41.2	40.8	40.4	30.0	30.6	23.3	41.9	28.3		37.9	23.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.6	0.8	0.1	10.5	15.7	0.1	20.0	2.8		3.8	0.8	
Delay (s)	42.8	41.6	40.4	40.5	46.3	23.4	62.0	31.1		41.7	24.4	
Level of Service	D	D	D	D	D	C	E	C		D	C	
Approach Delay (s)		41.7			40.1			33.3			26.1	
Approach LOS		D			D			C			C	

Intersection Summary				
HCM Average Control Delay	32.7	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.76			
Actuated Cycle Length (s)	92.6	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	69.0%	ICU Level of Service	C	
Analysis Period (min)	15			

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	349	1043	261	165	918	0	0	625	677
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0	4.0	4.0	4.0	4.0			4.0	4.0
Lane Util. Factor				0.97	0.91	1.00	0.97	0.95			0.86	0.86
Frpb, ped/bikes				1.00	1.00	1.00	1.00	1.00			0.93	1.00
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00			1.00	1.00
Frt				1.00	1.00	0.85	1.00	1.00			0.95	0.85
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				3433	5085	1583	3433	3539			4250	1362
Flt Permitted				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)				3433	5085	1583	3433	3539			4250	1362
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	388	1159	290	183	1020	0	0	694	752
RTOR Reduction (vph)	0	0	0	0	0	53	0	0	0	0	10	10
Lane Group Flow (vph)	0	0	0	388	1159	237	183	1020	0	0	1060	366
Confl. Peds. (#/hr)												200
Turn Type				Split		Prot	Prot					Prot
Protected Phases				8	8	8	5	2			6	6
Permitted Phases												
Actuated Green, G (s)				16.0	16.0	16.0	3.0	24.2			17.2	17.2
Effective Green, g (s)				16.0	16.0	16.0	3.0	24.2			17.2	17.2
Actuated g/C Ratio				0.33	0.33	0.33	0.06	0.50			0.36	0.36
Clearance Time (s)				4.0	4.0	4.0	4.0	4.0			4.0	4.0
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)				1140	1688	525	214	1777			1517	486
v/s Ratio Prot				0.11	c0.23	0.15	0.05	c0.29			0.25	c0.27
v/s Ratio Perm												
v/c Ratio				0.34	0.69	0.45	0.86	0.57			0.70	0.75
Uniform Delay, d1				12.1	13.9	12.6	22.4	8.4			13.3	13.6
Progression Factor				1.00	1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2				0.2	1.2	0.6	26.8	0.5			1.4	6.5
Delay (s)				12.3	15.1	13.3	49.1	8.8			14.7	20.1
Level of Service				B	B	B	D	A			B	C
Approach Delay (s)		0.0			14.2			15.0			16.1	
Approach LOS		A			B			B			B	

Intersection Summary				
HCM Average Control Delay	15.0	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.73			
Actuated Cycle Length (s)	48.2	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	102.0%	ICU Level of Service	G	
Analysis Period (min)	15			

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	651	943	317	0	0	0	0	409	227	150	751	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Lane Util. Factor	0.91	0.86	0.91					0.86		1.00	0.91	
Frt	1.00	1.00	0.85					0.95		1.00	1.00	
Flt Protected	0.95	0.99	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	1610	3172	1441					6065		1770	5085	
Flt Permitted	0.95	0.99	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	1610	3172	1441					6065		1770	5085	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	723	1048	352	0	0	0	0	454	252	167	834	0
RTOR Reduction (vph)	0	3	55	0	0	0	0	55	0	0	0	0
Lane Group Flow (vph)	586	1217	262	0	0	0	0	651	0	167	834	0
Turn Type	Split		Prot							Prot		
Protected Phases	4	4	4					2		1	6	
Permitted Phases												
Actuated Green, G (s)	27.1	27.1	27.1					13.3		7.9	25.2	
Effective Green, g (s)	27.1	27.1	27.1					13.3		7.9	25.2	
Actuated g/C Ratio	0.45	0.45	0.45					0.22		0.13	0.42	
Clearance Time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	724	1426	648					1338		232	2125	
v/s Ratio Prot	0.36	c0.38	0.18					c0.11		c0.09	0.16	
v/s Ratio Perm												
v/c Ratio	0.81	0.85	0.41					0.49		0.72	0.39	
Uniform Delay, d1	14.4	14.8	11.2					20.5		25.1	12.2	
Progression Factor	1.00	1.00	1.00					1.00		1.00	1.00	
Incremental Delay, d2	6.7	5.2	0.4					0.3		10.2	0.1	
Delay (s)	21.0	20.0	11.6					20.8		35.4	12.3	
Level of Service	C	C	B					C		D	B	
Approach Delay (s)		19.0			0.0			20.8			16.2	
Approach LOS		B			A			C			B	

Intersection Summary				
HCM Average Control Delay	18.6	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.73			
Actuated Cycle Length (s)	60.3	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	102.0%	ICU Level of Service	G	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Volume (vph)	16	216	0	440	25	97	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		0.95		1.00	1.00
Frt	1.00	1.00		0.99		1.00	0.85
Flt Protected	0.95	1.00		1.00		0.95	1.00
Satd. Flow (prot)	1770	3539		3510		1770	1583
Flt Permitted	0.95	1.00		1.00		0.95	1.00
Satd. Flow (perm)	1770	3539		3510		1770	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	18	240	0	489	28	108	128
RTOR Reduction (vph)	0	0	0	8	0	0	100
Lane Group Flow (vph)	18	240	0	509	0	108	28
Turn Type	Prot		Prot				Prot
Protected Phases	7	4	3	8		6	6
Permitted Phases							
Actuated Green, G (s)	0.5	12.0		7.5		5.6	5.6
Effective Green, g (s)	0.5	12.0		7.5		5.6	5.6
Actuated g/C Ratio	0.02	0.47		0.29		0.22	0.22
Clearance Time (s)	4.0	4.0		4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0		3.0	3.0
Lane Grp Cap (vph)	35	1659		1028		387	346
v/s Ratio Prot	0.01	c0.07		c0.14		c0.06	0.02
v/s Ratio Perm							
v/c Ratio	0.51	0.14		0.49		0.28	0.08
Uniform Delay, d1	12.4	3.9		7.5		8.3	8.0
Progression Factor	1.00	1.00		1.00		1.00	1.00
Incremental Delay, d2	12.2	0.0		0.4		0.4	0.1
Delay (s)	24.6	3.9		7.9		8.7	8.1
Level of Service	C	A		A		A	A
Approach Delay (s)		5.4		7.9		8.4	
Approach LOS		A		A		A	

Intersection Summary				
HCM Average Control Delay	7.3	HCM Level of Service	A	
HCM Volume to Capacity ratio	0.41			
Actuated Cycle Length (s)	25.6	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	26.7%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBR	EBR2	WBL	WBT	WBR	NBL	NBT	NBR2	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	76	220	179	275	373	100	342	346	287	1102	227	207
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.88	1.00	1.00	1.00		1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.85	0.85	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	2787	1583	1770	1804		1770	3539	1583	3433	3539	1583
Flt Permitted	0.46	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	864	2787	1583	1770	1804		1770	3539	1583	3433	3539	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	84	244	199	306	414	111	380	384	319	1224	252	230
RTOR Reduction (vph)	0	0	170	0	10	0	0	0	269	0	0	173
Lane Group Flow (vph)	84	244	29	306	515	0	380	384	50	1224	252	57
Turn Type	custom	custom	custom	Prot			Prot		Perm	Prot		Perm
Protected Phases				3	8		5	2		1	6	
Permitted Phases	4	4	4						2			6
Actuated Green, G (s)	13.9	13.9	13.9	17.0	34.9		25.5	15.0	15.0	34.1	23.6	23.6
Effective Green, g (s)	13.9	13.9	13.9	17.0	34.9		25.5	15.0	15.0	34.1	23.6	23.6
Actuated g/C Ratio	0.14	0.14	0.14	0.18	0.36		0.27	0.16	0.16	0.36	0.25	0.25
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	125	404	229	313	656		470	553	247	1219	870	389
v/s Ratio Prot				c0.17	c0.29		0.21	c0.11		c0.36	0.07	
v/s Ratio Perm	0.10	0.09	0.02						0.03			0.04
v/c Ratio	0.67	0.60	0.13	0.98	0.79		0.81	0.69	0.20	1.00	0.29	0.15
Uniform Delay, d1	38.9	38.5	35.8	39.3	27.2		33.0	38.3	35.3	31.0	29.4	28.3
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	13.3	2.5	0.2	44.3	6.2		9.9	3.8	0.4	26.8	0.2	0.2
Delay (s)	52.2	41.0	36.0	83.6	33.4		42.8	42.1	35.7	57.7	29.6	28.5
Level of Service	D	D	D	F	C		D	D	D	E	C	C
Approach Delay (s)					51.9			40.5			49.6	
Approach LOS					D			D			D	

Intersection Summary				
HCM Average Control Delay	46.6	HCM Level of Service	D	
HCM Volume to Capacity ratio	0.88			
Actuated Cycle Length (s)	96.0	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	84.3%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	450	0	330	0	0	0	0	530	129	188	462	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95	1.00					0.95		0.97	0.95	
Frt	1.00	1.00	0.85					0.97		1.00	1.00	
Flt Protected	0.95	0.95	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	1681	1681	1583					3436		3433	3539	
Flt Permitted	0.95	0.95	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	1681	1681	1583					3436		3433	3539	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	500	0	367	0	0	0	0	589	143	209	513	0
RTOR Reduction (vph)	0	0	205	0	0	0	0	43	0	0	0	0
Lane Group Flow (vph)	250	250	162	0	0	0	0	689	0	209	513	0
Turn Type	Split		Prot							Prot		
Protected Phases	4	4	4					2		1	6	
Permitted Phases												
Actuated Green, G (s)	13.1	13.1	13.1					14.2		3.6	21.8	
Effective Green, g (s)	13.1	13.1	13.1					14.2		3.6	21.8	
Actuated g/C Ratio	0.31	0.31	0.31					0.33		0.08	0.51	
Clearance Time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	513	513	483					1137		288	1798	
v/s Ratio Prot	c0.15	0.15	0.10					c0.20		c0.06	0.14	
v/s Ratio Perm												
v/c Ratio	0.49	0.49	0.34					0.61		0.73	0.29	
Uniform Delay, d1	12.2	12.2	11.5					12.0		19.2	6.1	
Progression Factor	1.00	1.00	1.00					1.00		1.00	1.00	
Incremental Delay, d2	0.7	0.7	0.4					0.9		8.8	0.1	
Delay (s)	12.9	12.9	11.9					12.9		27.9	6.2	
Level of Service	B	B	B					B		C	A	
Approach Delay (s)		12.5			0.0			12.9			12.5	
Approach LOS		B			A			B			B	

Intersection Summary				
HCM Average Control Delay	12.6	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.57			
Actuated Cycle Length (s)	42.9	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	46.6%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	89	512	37	145	472	345	58	66	243	642	143	183
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		4.0	5.0		4.0	5.0		4.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		0.97	1.00	
Frt	1.00	0.99		1.00	0.94		1.00	0.88		1.00	0.92	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3504		1770	3315		1770	1643		3433	1706	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3504		1770	3315		1770	1643		3433	1706	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	99	569	41	161	524	383	64	73	270	713	159	203
RTOR Reduction (vph)	0	7	0	0	167	0	0	139	0	0	55	0
Lane Group Flow (vph)	99	603	0	161	740	0	64	204	0	713	307	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												
Actuated Green, G (s)	5.0	17.8		9.0	20.8		4.0	14.4		17.6	28.0	
Effective Green, g (s)	5.0	17.8		9.0	20.8		4.0	14.4		17.6	28.0	
Actuated g/C Ratio	0.07	0.23		0.12	0.27		0.05	0.19		0.23	0.36	
Clearance Time (s)	5.0	5.0		4.0	5.0		4.0	5.0		4.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	115	812		207	898		92	308		787	622	
v/s Ratio Prot	0.06	0.17		c0.09	c0.22		0.04	c0.12		c0.21	0.18	
v/s Ratio Perm												
v/c Ratio	0.86	0.74		0.78	0.82		0.70	0.66		0.91	0.49	
Uniform Delay, d1	35.6	27.4		32.9	26.3		35.8	28.9		28.8	18.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	44.1	3.7		16.6	6.2		20.4	5.3		13.9	0.6	
Delay (s)	79.7	31.1		49.6	32.5		56.2	34.2		42.7	19.5	
Level of Service	E	C		D	C		E	C		D	B	
Approach Delay (s)		37.9			35.1			37.7			34.9	
Approach LOS		D			D			D			C	

Intersection Summary				
HCM Average Control Delay	35.9	HCM Level of Service	D	
HCM Volume to Capacity ratio	0.82			
Actuated Cycle Length (s)	76.8	Sum of lost time (s)	18.0	
Intersection Capacity Utilization	81.6%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	WBL	WBR	SEL	SET	NWT	NWR	NWR2	SWL	SWR
Lane Configurations									
Volume (vph)	0	0	777	597	764	0	315	137	233
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor			0.97	0.95	0.95		1.00	0.97	1.00
Frt			1.00	1.00	1.00		0.85	1.00	0.85
Flt Protected			0.95	1.00	1.00		1.00	0.95	1.00
Satd. Flow (prot)			3433	3539	3539		1583	3433	1583
Flt Permitted			0.95	1.00	1.00		1.00	0.95	1.00
Satd. Flow (perm)			3433	3539	3539		1583	3433	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	863	663	849	0	350	152	259
RTOR Reduction (vph)	0	0	0	0	0	0	237	0	221
Lane Group Flow (vph)	0	0	863	663	849	0	113	152	38
Turn Type			Prot				Perm		Perm
Protected Phases			5	2	6			4	
Permitted Phases							6		4
Actuated Green, G (s)			17.4	39.3	17.9		17.9	8.2	8.2
Effective Green, g (s)			17.4	39.3	17.9		17.9	8.2	8.2
Actuated g/C Ratio			0.31	0.71	0.32		0.32	0.15	0.15
Clearance Time (s)			4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)			3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)			1076	2506	1141		511	507	234
v/s Ratio Prot			c0.25	0.19	c0.24			c0.04	
v/s Ratio Perm							0.07		0.02
v/c Ratio			0.80	0.26	0.74		0.22	0.30	0.16
Uniform Delay, d1			17.5	2.9	16.8		13.7	21.1	20.7
Progression Factor			1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2			4.4	0.1	2.7		0.2	0.3	0.3
Delay (s)			21.9	3.0	19.4		13.9	21.4	21.0
Level of Service			C	A	B		B	C	C
Approach Delay (s)	0.0			13.7	17.8			21.1	
Approach LOS	A			B	B			C	

Intersection Summary				
HCM Average Control Delay	16.2	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.68			
Actuated Cycle Length (s)	55.5	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	57.2%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	353	381	0	0	745	220	309	2	166	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	0.97	0.95			0.95	1.00	0.95	0.95	1.00			
Frt	1.00	1.00			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (prot)	3433	3539			3539	1583	1681	1686	1583			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (perm)	3433	3539			3539	1583	1681	1686	1583			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	392	423	0	0	828	244	343	2	184	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	158	0	0	144	0	0	0
Lane Group Flow (vph)	392	423	0	0	828	86	171	174	40	0	0	0
Turn Type	Prot					Prot	Split		Prot			
Protected Phases	1	6			2	2	4	4	4			
Permitted Phases												
Actuated Green, G (s)	10.1	32.2			18.1	18.1	11.3	11.3	11.3			
Effective Green, g (s)	10.1	32.2			18.1	18.1	11.3	11.3	11.3			
Actuated g/C Ratio	0.20	0.63			0.35	0.35	0.22	0.22	0.22			
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0			
Lane Grp Cap (vph)	673	2213			1244	556	369	370	347			
v/s Ratio Prot	c0.11	0.12			c0.23	0.05	0.10	c0.10	0.03			
v/s Ratio Perm												
v/c Ratio	0.58	0.19			0.67	0.15	0.46	0.47	0.12			
Uniform Delay, d1	18.8	4.1			14.1	11.5	17.5	17.5	16.1			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	1.3	0.0			1.4	0.1	0.9	0.9	0.2			
Delay (s)	20.1	4.1			15.5	11.6	18.4	18.4	16.3			
Level of Service	C	A			B	B	B	B	B			
Approach Delay (s)		11.8			14.6			17.7			0.0	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	14.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	51.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	49.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

ALL-WAY STOP CONTROL ANALYSIS

General Information		Site Information	
Analyst	Jacob Swim	Intersection	Carmel Creek Rd./Del Mar Trail
Agency/Co.	USAI	Jurisdiction	City of San Diego
Date Performed	3/25/2011	Analysis Year	2011
Analysis Time Period	36 NT+P AM (Phase 1&2)		

Project ID 002407 - San Diego Corporate Center Lots

East/West Street: Del Mar Trail North/South Street: Carmel Creek Road

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	10	10	10	206	2	26
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	3	272	103	15	960	3
%Thrus Left Lane	50			50		

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		LTR		LT	TR	LT	TR
PHF	0.90		0.90		0.90	0.90	0.90	0.90
Flow Rate (veh/h)	33		258		154	265	549	536
% Heavy Vehicles	2		2		2	2	2	2
No. Lanes	1		1		2		2	
Geometry Group	2		2		5		5	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Prop. Left-Turns	0.3		0.9		0.0	0.0	0.0	0.0
Prop. Right-Turns	0.3		0.1		0.0	0.4	0.0	0.0
Prop. Heavy Vehicle	0.0		0.0		0.0	0.0	0.0	0.0
hLT-adj	0.2	0.2	0.2	0.2	0.5	0.5	0.5	0.5
hRT-adj	-0.6	-0.6	-0.6	-0.6	-0.7	-0.7	-0.7	-0.7
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	-0.1		0.1		0.0	-0.3	0.0	0.0

Departure Headway and Service Time

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
hd, initial value (s)	3.20		3.20		3.20	3.20	3.20	3.20
x, initial	0.03		0.23		0.14	0.24	0.49	0.48
hd, final value (s)	7.50		6.83		7.16	6.85	6.34	6.33
x, final value	0.07		0.49		0.31	0.50	0.97	0.94
Move-up time, m (s)	2.0		2.0		2.3		2.3	
Service Time, t_s (s)	5.5		4.8		4.9	4.5	4.0	4.0

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	283		508		404	515	568	569
Delay (s/veh)	11.06		16.22		13.00	16.30	54.78	49.33
LOS	B		C		B	C	F	E
Approach: Delay (s/veh)	11.06		16.22		15.08		52.09	
LOS	B		C		C		F	
Intersection Delay (s/veh)	37.54							
Intersection LOS	E							

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	6	478	538	180	425	3	565	2	434	0	2	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.95	1.00		1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1861			1774	1583		1779	
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.95	1.00		1.00	
Satd. Flow (perm)	1770	1863	1583	1770	1861			1774	1583		1779	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	6	503	566	189	447	3	595	2	457	0	2	1
RTOR Reduction (vph)	0	0	215	0	0	0	0	0	283	0	1	0
Lane Group Flow (vph)	6	503	351	189	450	0	0	597	174	0	2	0
Turn Type	Prot		Perm	Prot			Split		Perm	Split		
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4						2			
Actuated Green, G (s)	0.8	35.3	35.3	13.3	47.8			40.4	40.4		1.1	
Effective Green, g (s)	0.8	35.3	35.3	13.3	47.8			40.4	40.4		1.1	
Actuated g/C Ratio	0.01	0.33	0.33	0.13	0.45			0.38	0.38		0.01	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	13	620	527	222	838			675	603		18	
v/s Ratio Prot	0.00	c0.27		c0.11	0.24			c0.34			c0.00	
v/s Ratio Perm			0.22						0.11			
v/c Ratio	0.46	0.81	0.67	0.85	0.54			0.88	0.29		0.11	
Uniform Delay, d1	52.4	32.4	30.4	45.4	21.1			30.7	22.9		52.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	23.8	7.9	3.2	25.5	0.7			13.2	0.3		2.7	
Delay (s)	76.2	40.3	33.5	71.0	21.8			43.8	23.1		54.8	
Level of Service	E	D	C	E	C			D	C		D	
Approach Delay (s)		36.9			36.3			34.9			54.8	
Approach LOS		D			D			C			D	

Intersection Summary				
HCM Average Control Delay	36.0	HCM Level of Service	D	
HCM Volume to Capacity ratio	0.84			
Actuated Cycle Length (s)	106.1	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	83.2%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Volume (vph)	215	264	0	576	378	342	303
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00		1.00	1.00	1.00	0.95
Frt	1.00	0.85		1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00		1.00	1.00	0.95	1.00
Satd. Flow (prot)	3433	1583		1863	1583	1770	3539
Flt Permitted	0.95	1.00		1.00	1.00	0.95	1.00
Satd. Flow (perm)	3433	1583		1863	1583	1770	3539
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	239	293	0	640	420	380	337
RTOR Reduction (vph)	0	243	0	0	250	0	0
Lane Group Flow (vph)	239	50	0	640	170	380	337
Turn Type		Perm	Prot		Perm	Prot	
Protected Phases	1		3	8		7	
Permitted Phases		1			8		6
Actuated Green, G (s)	12.3	12.3		29.1	29.1	18.7	12.3
Effective Green, g (s)	12.3	12.3		29.1	29.1	18.7	12.3
Actuated g/C Ratio	0.17	0.17		0.40	0.40	0.26	0.17
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	586	270		752	639	459	604
v/s Ratio Prot	0.07			c0.34		c0.21	
v/s Ratio Perm		0.03			0.11		c0.10
v/c Ratio	0.41	0.19		0.85	0.27	0.83	0.56
Uniform Delay, d1	26.7	25.6		19.5	14.4	25.2	27.4
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5	0.3		9.1	0.2	11.7	1.1
Delay (s)	27.1	25.9		28.7	14.6	36.9	28.5
Level of Service	C	C		C	B	D	C
Approach Delay (s)	26.5			23.1			32.9
Approach LOS	C			C			C

Intersection Summary				
HCM Average Control Delay	26.9	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.78			
Actuated Cycle Length (s)	72.1	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	65.4%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Volume (vph)	65	6	0	913	111	8	515
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0		4.0	4.0
Lane Util. Factor	0.97			0.95		1.00	0.95
Frt	0.99			0.98		1.00	1.00
Flt Protected	0.96			1.00		0.95	1.00
Satd. Flow (prot)	3410			3482		1770	3539
Flt Permitted	0.96			1.00		0.95	1.00
Satd. Flow (perm)	3410			3482		1770	3539
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	72	7	0	1014	123	9	572
RTOR Reduction (vph)	6	0	0	12	0	0	0
Lane Group Flow (vph)	73	0	0	1125	0	9	572
Turn Type			Prot			Prot	
Protected Phases	8		5	2		1	6
Permitted Phases							
Actuated Green, G (s)	3.2			19.9		0.6	24.5
Effective Green, g (s)	3.2			19.9		0.6	24.5
Actuated g/C Ratio	0.09			0.56		0.02	0.69
Clearance Time (s)	4.0			4.0		4.0	4.0
Vehicle Extension (s)	3.0			3.0		3.0	3.0
Lane Grp Cap (vph)	306			1941		30	2429
v/s Ratio Prot	c0.02			c0.32		0.01	c0.16
v/s Ratio Perm							
v/c Ratio	0.24			0.58		0.30	0.24
Uniform Delay, d1	15.1			5.2		17.3	2.1
Progression Factor	1.00			1.00		1.00	1.00
Incremental Delay, d2	0.4			0.4		5.6	0.1
Delay (s)	15.5			5.6		22.9	2.1
Level of Service	B			A		C	A
Approach Delay (s)	15.5			5.6			2.5
Approach LOS	B			A			A

Intersection Summary			
HCM Average Control Delay	5.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	35.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	38.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	22	14	22	21	155	26	829	62	89	459	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.94		1.00	0.87		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1751		1770	1616		1770	3502		1770	3509	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1751		1770	1616		1770	3502		1770	3509	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	26	24	16	24	23	172	29	921	69	99	510	31
RTOR Reduction (vph)	0	14	0	0	153	0	0	7	0	0	5	0
Lane Group Flow (vph)	26	26	0	24	42	0	29	983	0	99	536	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	0.9	5.4		0.9	5.4		1.7	21.9		4.3	24.5	
Effective Green, g (s)	0.9	5.4		0.9	5.4		1.7	21.9		4.3	24.5	
Actuated g/C Ratio	0.02	0.11		0.02	0.11		0.04	0.45		0.09	0.51	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	33	195		33	180		62	1581		157	1773	
v/s Ratio Prot	c0.01	0.01		0.01	c0.03		0.02	c0.28		c0.06	c0.15	
v/s Ratio Perm												
v/c Ratio	0.79	0.13		0.73	0.23		0.47	0.62		0.63	0.30	
Uniform Delay, d1	23.7	19.4		23.7	19.7		23.0	10.1		21.3	7.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	74.3	0.3		56.6	0.7		5.5	0.8		8.0	0.1	
Delay (s)	98.0	19.7		80.2	20.3		28.4	10.9		29.3	7.1	
Level of Service	F	B		F	C		C	B		C	A	
Approach Delay (s)		50.6			26.9			11.4			10.5	
Approach LOS		D			C			B			B	

Intersection Summary			
HCM Average Control Delay	14.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	48.5	Sum of lost time (s)	20.0
Intersection Capacity Utilization	57.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	7	42	33	49	30	20	48	978	130	23	489	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.94		1.00	0.98		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1751		1770	3477		1770	3529	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1583	1770	1751		1770	3477		1770	3529	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	8	47	37	54	33	22	53	1087	144	26	543	11
RTOR Reduction (vph)	0	0	34	0	20	0	0	11	0	0	1	0
Lane Group Flow (vph)	8	47	3	54	35	0	53	1220	0	26	553	0
Turn Type	Prot		Perm	Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	0.8	4.4	4.4	1.7	5.3		1.8	25.2		0.6	24.0	
Effective Green, g (s)	0.8	4.4	4.4	1.7	5.3		1.8	25.2		0.6	24.0	
Actuated g/C Ratio	0.02	0.09	0.09	0.04	0.11		0.04	0.53		0.01	0.50	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	30	171	145	63	194		67	1829		22	1768	
v/s Ratio Prot	0.00	c0.03		c0.03	0.02		c0.03	c0.35		0.01	0.16	
v/s Ratio Perm			0.00									
v/c Ratio	0.27	0.27	0.02	0.86	0.18		0.79	0.67		1.18	0.31	
Uniform Delay, d1	23.3	20.3	19.8	23.0	19.3		22.9	8.3		23.6	7.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.7	0.9	0.1	64.9	0.5		45.6	0.9		253.5	0.1	
Delay (s)	28.0	21.1	19.9	87.8	19.8		68.5	9.2		277.1	7.2	
Level of Service	C	C	B	F	B		E	A		F	A	
Approach Delay (s)		21.2			53.5			11.7			19.3	
Approach LOS		C			D			B			B	

Intersection Summary				
HCM Average Control Delay	16.4	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.58			
Actuated Cycle Length (s)	47.9	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	53.9%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	128	865	16	152	939	222	41	32	64	406	36	134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.95			1.00	1.00	0.95	0.95	
Frt	1.00	1.00		1.00	0.97			1.00	0.85	1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00	0.95	0.98	
Satd. Flow (prot)	1770	5071		1770	3438			1812	1583	1681	1611	
Flt Permitted	0.95	1.00		0.95	1.00			0.97	1.00	0.95	0.98	
Satd. Flow (perm)	1770	5071		1770	3438			1812	1583	1681	1611	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	142	961	18	169	1043	247	46	36	71	451	40	149
RTOR Reduction (vph)	0	2	0	0	21	0	0	0	64	0	35	0
Lane Group Flow (vph)	142	977	0	169	1269	0	0	82	7	329	276	0
Turn Type	Prot			Prot			Split		Prot	Split		
Protected Phases	7	4		3	8		2	2	2	6	6	
Permitted Phases												
Actuated Green, G (s)	7.8	27.9		11.1	31.2			7.6	7.6	17.3	17.3	
Effective Green, g (s)	7.8	27.9		11.1	31.2			7.6	7.6	17.3	17.3	
Actuated g/C Ratio	0.10	0.35		0.14	0.39			0.10	0.10	0.22	0.22	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	173	1771		246	1342			172	151	364	349	
v/s Ratio Prot	c0.08	0.19		0.10	c0.37			c0.05	0.00	c0.20	0.17	
v/s Ratio Perm												
v/c Ratio	0.82	0.55		0.69	0.95			0.48	0.04	0.90	0.79	
Uniform Delay, d1	35.4	21.0		32.7	23.5			34.3	32.9	30.5	29.6	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2	25.7	0.4		7.7	13.5			2.1	0.1	24.8	11.5	
Delay (s)	61.1	21.3		40.5	37.1			36.3	33.0	55.3	41.1	
Level of Service	E	C		D	D			D	C	E	D	
Approach Delay (s)		26.4			37.5			34.8			48.4	
Approach LOS		C			D			C			D	

Intersection Summary				
HCM Average Control Delay	35.7	HCM Level of Service	D	
HCM Volume to Capacity ratio	0.86			
Actuated Cycle Length (s)	79.9	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	73.7%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑			↑↑		↱
Volume (veh/h)	1288	64	0	1598	0	101
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	1431	71	0	1776	0	112
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	575			607		
pX, platoon unblocked			0.87		0.87	0.87
vC, conflicting volume			1502		2354	513
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1035		2020	0
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	88
cM capacity (veh/h)			577		44	938

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1
Volume Total	572	572	357	888	888	112
Volume Left	0	0	0	0	0	0
Volume Right	0	0	71	0	0	112
cSH	1700	1700	1700	1700	1700	938
Volume to Capacity	0.34	0.34	0.21	0.52	0.52	0.12
Queue Length 95th (ft)	0	0	0	0	0	10
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	9.4
Lane LOS						A
Approach Delay (s)	0.0			0.0		9.4
Approach LOS						A

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	47.5%	ICU Level of Service	A
Analysis Period (min)	15		

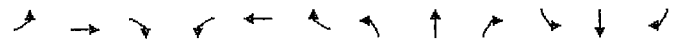
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↰↑↑	↱
Volume (vph)	0	1003	1355	0	971	299
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		0.97	0.91
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3539	3539		3431	1441
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3539	3539		3431	1441
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	1114	1506	0	1079	332
RTOR Reduction (vph)	0	0	0	0	4	9
Lane Group Flow (vph)	0	1114	1506	0	1108	290
Turn Type						Perm
Protected Phases		4	8		6	
Permitted Phases						6
Actuated Green, G (s)		26.0	26.0		20.3	20.3
Effective Green, g (s)		26.0	26.0		20.3	20.3
Actuated g/C Ratio		0.48	0.48		0.37	0.37
Clearance Time (s)		4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1695	1695		1283	539
v/s Ratio Prot		0.31	c0.43		c0.32	
v/s Ratio Perm						0.20
v/c Ratio		0.66	0.89		0.86	0.54
Uniform Delay, d1		10.8	12.8		15.7	13.3
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		0.9	6.1		6.3	1.0
Delay (s)		11.7	18.9		22.0	14.4
Level of Service		B	B		C	B
Approach Delay (s)		11.7	18.9		20.4	
Approach LOS		B	B		C	

Intersection Summary				
HCM Average Control Delay	17.4	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.88			
Actuated Cycle Length (s)	54.3	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	121.5%	ICU Level of Service	H	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	242	1677	0	0	1579	1007	649	24	942	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	0.97	0.95			0.91	1.00	0.95	0.91	0.95			
Frt	1.00	1.00			1.00	0.85	1.00	0.88	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99	1.00			
Satd. Flow (prot)	3433	3539			5085	1583	1681	1481	1504			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99	1.00			
Satd. Flow (perm)	3433	3539			5085	1583	1681	1481	1504			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	269	1863	0	0	1754	1119	721	27	1047	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	512	0	4	4	0	0	0
Lane Group Flow (vph)	269	1863	0	0	1754	607	627	588	572	0	0	0
Turn Type	Prot					Prot	Split		Prot			
Protected Phases	7	4			8	8	2	2	2			
Permitted Phases												
Actuated Green, G (s)	10.0	51.0			37.0	37.0	41.0	41.0	41.0			
Effective Green, g (s)	10.0	51.0			37.0	37.0	41.0	41.0	41.0			
Actuated g/C Ratio	0.10	0.51			0.37	0.37	0.41	0.41	0.41			
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0			
Lane Grp Cap (vph)	343	1805			1881	586	689	607	617			
v/s Ratio Prot	0.08	c0.53			0.34	0.38	0.37	c0.40	0.38			
v/s Ratio Perm												
v/c Ratio	0.78	1.03			0.93	1.04	0.91	0.97	0.93			
Uniform Delay, d1	43.9	24.5			30.3	31.5	27.8	28.9	28.1			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	11.2	29.9			9.0	47.0	16.2	28.4	20.0			
Delay (s)	55.1	54.4			39.3	78.5	43.9	57.3	48.1			
Level of Service	E	D			D	E	D	E	D			
Approach Delay (s)		54.5			54.6			49.7			0.0	
Approach LOS		D			D			D			A	

Intersection Summary				
HCM Average Control Delay	53.3	HCM Level of Service	D	
HCM Volume to Capacity ratio	1.00			
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	107.5%	ICU Level of Service	G	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	249	2393	259	54	1862	68	637	67	161	51	30	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		0.97	0.95		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.89		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5058		3433	3164		1770	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5058		3433	3164		1770	1863	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	277	2659	288	60	2069	76	708	74	179	57	33	91
RTOR Reduction (vph)	0	0	57	0	2	0	0	138	0	0	0	85
Lane Group Flow (vph)	277	2659	231	60	2143	0	708	115	0	57	33	6
Turn Type	Prot		Perm	Prot			Prot			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									6
Actuated Green, G (s)	25.6	73.0	73.0	8.6	56.0		31.1	31.5		8.4	8.8	8.8
Effective Green, g (s)	25.6	73.0	73.0	8.6	56.0		31.1	31.5		8.4	8.8	8.8
Actuated g/C Ratio	0.19	0.53	0.53	0.06	0.41		0.23	0.23		0.06	0.06	0.06
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	330	2700	840	111	2060		776	725		108	119	101
v/s Ratio Prot	c0.16	c0.52		0.03	c0.42		c0.21	0.04		0.03	c0.02	
v/s Ratio Perm			0.15									0.00
v/c Ratio	0.84	0.98	0.28	0.54	1.04		0.91	0.16		0.53	0.28	0.06
Uniform Delay, d1	54.0	31.7	17.7	62.5	40.8		51.9	42.4		62.6	61.3	60.5
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	16.8	13.8	0.2	5.3	31.2		15.0	0.1		4.6	1.3	0.2
Delay (s)	70.8	45.5	17.9	67.8	71.9		66.9	42.5		67.2	62.6	60.7
Level of Service	E	D	B	E	E		E	D		E	E	E
Approach Delay (s)		45.2			71.8			60.4			63.1	
Approach LOS		D			E			E			E	

Intersection Summary				
HCM Average Control Delay	56.9	HCM Level of Service	E	
HCM Volume to Capacity ratio	0.95			
Actuated Cycle Length (s)	137.5	Sum of lost time (s)	20.0	
Intersection Capacity Utilization	86.1%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↱	↰	↑↑↑	↰↰	↱
Volume (vph)	2511	140	109	1940	235	182
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	5085	1583	1770	5085	3433	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	5085	1583	1770	5085	3433	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	2790	156	121	2156	261	202
RTOR Reduction (vph)	0	59	0	0	0	126
Lane Group Flow (vph)	2790	97	121	2156	261	76
Turn Type		Prot	Prot			Prot
Protected Phases	4	4	3	8	2	2
Permitted Phases						
Actuated Green, G (s)	52.0	52.0	8.0	64.0	11.7	11.7
Effective Green, g (s)	52.0	52.0	8.0	64.0	11.7	11.7
Actuated g/C Ratio	0.62	0.62	0.10	0.76	0.14	0.14
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	3159	983	169	3888	480	221
v/s Ratio Prot	c0.55	0.06	c0.07	0.42	c0.08	0.05
v/s Ratio Perm						
v/c Ratio	0.88	0.10	0.72	0.55	0.54	0.35
Uniform Delay, d1	13.3	6.4	36.7	4.0	33.5	32.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.3	0.0	13.5	0.2	1.3	0.9
Delay (s)	16.6	6.4	50.2	4.2	34.8	33.5
Level of Service	B	A	D	A	C	C
Approach Delay (s)	16.0			6.6	34.2	
Approach LOS	B			A	C	

Intersection Summary				
HCM Average Control Delay	13.8	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.81			
Actuated Cycle Length (s)	83.7	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	71.3%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↱	↰↰	↑↑↑	↰	↱
Volume (vph)	2576	117	117	1853	195	195
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	0.97	0.91	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	5085	1583	3433	5085	1770	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	5085	1583	3433	5085	1770	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	2862	130	130	2059	217	217
RTOR Reduction (vph)	0	52	0	0	0	80
Lane Group Flow (vph)	2862	78	130	2059	217	137
Turn Type		Prot	Prot			Prot
Protected Phases	4	4	3	8	2	2
Permitted Phases						
Actuated Green, G (s)	46.1	46.1	4.5	54.6	13.9	13.9
Effective Green, g (s)	46.1	46.1	4.5	54.6	13.9	13.9
Actuated g/C Ratio	0.60	0.60	0.06	0.71	0.18	0.18
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	3064	954	202	3629	322	288
v/s Ratio Prot	c0.56	0.05	0.04	c0.40	c0.12	0.09
v/s Ratio Perm						
v/c Ratio	0.93	0.08	0.64	0.57	0.67	0.48
Uniform Delay, d1	13.8	6.4	35.2	5.3	29.2	28.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	6.1	0.0	6.9	0.2	5.5	1.2
Delay (s)	19.9	6.4	42.1	5.5	34.7	29.3
Level of Service	B	A	D	A	C	C
Approach Delay (s)	19.4			7.6	32.0	
Approach LOS	B			A	C	

Intersection Summary				
HCM Average Control Delay	15.8	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.87			
Actuated Cycle Length (s)	76.5	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	68.5%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	504	1718	492	155	942	181	616	447	309	151	170	228
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.91		0.97	0.91		0.97	0.91	1.00	0.97	0.91	
Frt	1.00	0.97		1.00	0.98		1.00	1.00	0.85	1.00	0.91	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	4915		3433	4962		3433	5085	1583	3433	4649	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3433	4915		3433	4962		3433	5085	1583	3433	4649	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	560	1909	547	172	1047	201	684	497	343	168	189	253
RTOR Reduction (vph)	0	41	0	0	23	0	0	0	153	0	199	0
Lane Group Flow (vph)	560	2415	0	172	1225	0	684	497	190	168	243	0
Turn Type	Prot			Prot			Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Actuated Green, G (s)	19.0	50.6		10.4	42.0		24.2	27.3	27.3	8.5	11.6	
Effective Green, g (s)	19.0	50.6		10.4	42.0		24.2	27.3	27.3	8.5	11.6	
Actuated g/C Ratio	0.17	0.45		0.09	0.37		0.21	0.24	0.24	0.08	0.10	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	578	2205		317	1848		737	1231	383	259	478	
v/s Ratio Prot	c0.16	c0.49		0.05	0.25		c0.20	0.10		0.05	0.05	
v/s Ratio Perm									c0.12			
v/c Ratio	0.97	1.10		0.54	0.66		0.93	0.40	0.50	0.65	0.51	
Uniform Delay, d1	46.6	31.1		48.9	29.5		43.4	35.9	36.8	50.7	47.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	29.3	50.8		1.9	0.9		17.7	0.2	1.0	5.5	0.9	
Delay (s)	75.9	81.9		50.8	30.4		61.2	36.1	37.8	56.2	48.8	
Level of Service	E	F		D	C		E	D	D	E	D	
Approach Delay (s)		80.8			32.9			47.8			50.8	
Approach LOS		F			C			D			D	

Intersection Summary				
HCM Average Control Delay	60.0	HCM Level of Service	E	
HCM Volume to Capacity ratio	0.92			
Actuated Cycle Length (s)	112.8	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	87.9%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	137	1271	588	82	646	74	401	172	149	80	128	132
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	0.97	0.91		0.97	0.91		0.97	0.91		1.00	0.95	
Frt	1.00	0.95		1.00	0.98		1.00	0.93		1.00	0.92	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	4844		3433	5007		3433	4731		1770	3269	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	4844		3433	5007		3433	4731		1770	3269	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	152	1412	653	91	718	82	446	191	166	89	142	147
RTOR Reduction (vph)	0	84	0	0	15	0	0	134	0	0	129	0
Lane Group Flow (vph)	152	1981	0	91	785	0	446	223	0	89	160	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	7.9	38.3		3.5	33.9		13.1	15.7		7.3	9.9	
Effective Green, g (s)	7.9	38.3		3.5	33.9		13.1	15.7		7.3	9.9	
Actuated g/C Ratio	0.10	0.47		0.04	0.42		0.16	0.19		0.09	0.12	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	336	2296		149	2101		557	919		160	401	
v/s Ratio Prot	c0.04	c0.41		0.03	0.16		c0.13	0.05		0.05	c0.05	
v/s Ratio Perm												
v/c Ratio	0.45	0.86		0.61	0.37		0.80	0.24		0.56	0.40	
Uniform Delay, d1	34.4	18.9		38.0	16.1		32.6	27.5		35.2	32.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.0	3.6		7.2	0.1		8.1	0.1		4.1	0.7	
Delay (s)	35.4	22.5		45.2	16.3		40.7	27.7		39.3	33.4	
Level of Service	D	C		D	B		D	C		D	C	
Approach Delay (s)		23.4			19.2			34.9			34.8	
Approach LOS		C			B			C			C	

Intersection Summary				
HCM Average Control Delay	25.7	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.77			
Actuated Cycle Length (s)	80.8	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	73.6%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	49	1297	160	8	689	23	68	14	32	28	8	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	1.00		1.00	0.90		1.00	0.88	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5001		1770	5060		1770	1669		1770	1642	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	5001		1770	5060		1770	1669		1770	1642	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	54	1441	178	9	766	26	76	16	36	31	9	34
RTOR Reduction (vph)	0	17	0	0	4	0	0	32	0	0	32	0
Lane Group Flow (vph)	54	1602	0	9	788	0	76	20	0	31	11	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	1.2	23.7		0.6	23.1		2.5	4.7		0.6	2.8	
Effective Green, g (s)	1.2	23.7		0.6	23.1		2.5	4.7		0.6	2.8	
Actuated g/C Ratio	0.03	0.52		0.01	0.51		0.05	0.10		0.01	0.06	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	47	2599		23	2563		97	172		23	101	
v/s Ratio Prot	c0.03	c0.32		0.01	0.16		c0.04	c0.01		0.02	0.01	
v/s Ratio Perm												
v/c Ratio	1.15	0.62		0.39	0.31		0.78	0.11		1.35	0.11	
Uniform Delay, d1	22.2	7.7		22.3	6.6		21.3	18.6		22.5	20.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	178.2	0.4		10.7	0.1		32.8	0.3		309.8	0.5	
Delay (s)	200.4	8.2		33.0	6.6		54.0	18.9		332.3	20.7	
Level of Service	F	A		C	A		D	B		F	C	
Approach Delay (s)		14.4			6.9			39.8			151.2	
Approach LOS		B			A			D			F	

Intersection Summary				
HCM Average Control Delay	17.2	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.48			
Actuated Cycle Length (s)	45.6	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	52.4%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	296	993	65	22	491	25	40	46	35	24	33	195
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.94		1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5039		1770	5048		1770	1742		1770	1624	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	5039		1770	5048		1770	1742		1770	1624	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	329	1103	72	24	546	28	44	51	39	27	37	217
RTOR Reduction (vph)	0	8	0	0	7	0	0	33	0	0	186	0
Lane Group Flow (vph)	329	1167	0	24	567	0	44	57	0	27	68	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	14.3	29.5		0.7	15.9		1.6	8.1		1.6	8.1	
Effective Green, g (s)	14.3	29.5		0.7	15.9		1.6	8.1		1.6	8.1	
Actuated g/C Ratio	0.26	0.53		0.01	0.28		0.03	0.14		0.03	0.14	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	453	2659		22	1436		51	252		51	235	
v/s Ratio Prot	c0.19	c0.23		0.01	0.11		c0.02	0.03		0.02	c0.04	
v/s Ratio Perm												
v/c Ratio	0.73	0.44		1.09	0.39		0.86	0.22		0.53	0.29	
Uniform Delay, d1	19.0	8.1		27.6	16.1		27.0	21.1		26.8	21.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	5.7	0.1		221.9	0.2		76.8	0.5		9.6	0.7	
Delay (s)	24.7	8.2		249.5	16.3		103.8	21.6		36.4	22.0	
Level of Service	C	A		F	B		F	C		D	C	
Approach Delay (s)		11.8			25.7			48.6			23.4	
Approach LOS		B			C			D			C	

Intersection Summary				
HCM Average Control Delay	18.4	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.51			
Actuated Cycle Length (s)	55.9	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	56.9%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	850	186	92	434	120	255
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.91		1.00	0.91	0.97	1.00
Frt	0.97		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	4948		1770	5085	3433	1583
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	4948		1770	5085	3433	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	944	207	102	482	133	283
RTOR Reduction (vph)	56	0	0	0	0	228
Lane Group Flow (vph)	1095	0	102	482	133	55
Turn Type			Prot			Prot
Protected Phases	4		3	8	2	2
Permitted Phases						
Actuated Green, G (s)	16.9		2.5	23.4	5.9	5.9
Effective Green, g (s)	16.9		2.5	23.4	5.9	5.9
Actuated g/C Ratio	0.45		0.07	0.63	0.16	0.16
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2242		119	3190	543	250
v/s Ratio Prot	c0.22		c0.06	0.09	c0.04	0.03
v/s Ratio Perm						
v/c Ratio	0.49		0.86	0.15	0.24	0.22
Uniform Delay, d1	7.2		17.2	2.9	13.7	13.7
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2		41.8	0.0	0.2	0.4
Delay (s)	7.3		59.0	2.9	14.0	14.1
Level of Service	A		E	A	B	B
Approach Delay (s)	7.3			12.7	14.1	
Approach LOS	A			B	B	

Intersection Summary				
HCM Average Control Delay	10.1	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.47			
Actuated Cycle Length (s)	37.3	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	43.0%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	196	39	39	194	23	255	117	860	168	334	437	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95			1.00	1.00	0.97	0.91		0.97	0.91	
Frt	1.00	0.96			1.00	0.85	1.00	0.98		1.00	0.99	
Flt Protected	0.95	0.98			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1681	1658			1783	1583	3433	4960		3433	5012	
Flt Permitted	0.95	0.98			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1681	1658			1783	1583	3433	4960		3433	5012	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	218	43	43	216	26	283	130	956	187	371	486	52
RTOR Reduction (vph)	0	19	0	0	0	226	0	35	0	0	14	0
Lane Group Flow (vph)	153	132	0	0	242	57	130	1108	0	371	524	0
Turn Type	Split			Split		Perm	Prot			Prot		
Protected Phases	2	2		6	6		3	8		7	4	
Permitted Phases						6						
Actuated Green, G (s)	11.6	11.6			14.6	14.6	5.3	20.1		10.1	24.9	
Effective Green, g (s)	11.6	11.6			14.6	14.6	5.3	20.1		10.1	24.9	
Actuated g/C Ratio	0.16	0.16			0.20	0.20	0.07	0.28		0.14	0.34	
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	269	266			360	319	251	1377		479	1724	
v/s Ratio Prot	c0.09	0.08			c0.14		0.04	c0.22		c0.11	0.10	
v/s Ratio Perm						0.04						
v/c Ratio	0.57	0.50			0.67	0.18	0.52	0.80		0.77	0.30	
Uniform Delay, d1	28.1	27.7			26.7	23.9	32.3	24.3		30.1	17.4	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.7	1.5			4.9	0.3	1.8	3.5		7.7	0.1	
Delay (s)	30.8	29.2			31.6	24.2	34.1	27.9		37.7	17.5	
Level of Service	C	C			C	C	C	C		D	B	
Approach Delay (s)		30.0			27.6			28.5			25.7	
Approach LOS		C			C			C			C	

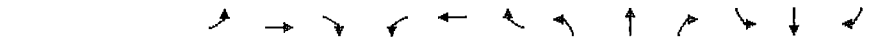
Intersection Summary				
HCM Average Control Delay	27.7	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.72			
Actuated Cycle Length (s)	72.4	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	58.5%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	129	108	178	14	56	118	116	528	10	187	612	96
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.90		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1673		1770	3529		1770	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	1863	1583	1770	1673		1770	3529		1770	3539	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	143	120	198	16	62	131	129	587	11	208	680	107
RTOR Reduction (vph)	0	0	137	0	106	0	0	2	0	0	0	75
Lane Group Flow (vph)	143	120	61	16	87	0	129	596	0	208	680	32
Turn Type	Prot		Prot	Prot			Prot			Prot		Prot
Protected Phases	7	4	4	3	8		5	2		1	6	6
Permitted Phases												
Actuated Green, G (s)	8.3	18.4	18.4	0.7	10.8		6.8	14.6		9.9	17.7	17.7
Effective Green, g (s)	8.3	18.4	18.4	0.7	10.8		6.8	14.6		9.9	17.7	17.7
Actuated g/C Ratio	0.14	0.31	0.31	0.01	0.18		0.11	0.24		0.17	0.30	0.30
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	246	575	489	21	303		202	864		294	1051	470
v/s Ratio Prot	c0.08	0.06	0.04	0.01	c0.05		0.07	0.17		c0.12	c0.19	0.02
v/s Ratio Perm												
v/c Ratio	0.58	0.21	0.13	0.76	0.29		0.64	0.69		0.71	0.65	0.07
Uniform Delay, d1	24.0	15.2	14.8	29.4	21.1		25.2	20.4		23.5	18.2	15.0
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	3.5	0.2	0.1	92.1	0.5		6.5	2.4		7.6	1.4	0.1
Delay (s)	27.5	15.4	14.9	121.4	21.6		31.7	22.8		31.0	19.6	15.1
Level of Service	C	B	B	F	C		C	C		C	B	B
Approach Delay (s)		18.9			29.2			24.4			21.5	
Approach LOS		B			C			C			C	

Intersection Summary				
HCM Average Control Delay	22.6	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.58			
Actuated Cycle Length (s)	59.6	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	55.9%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	217	12	10	144	2	111	29	790	206	149	572	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.91		1.00	0.91	
Frt	1.00	0.93		1.00	1.00	0.85	1.00	0.97		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1735		1770	1863	1583	1770	4927		1770	5044	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1735		1770	1863	1583	1770	4927		1770	5044	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	241	13	11	160	2	123	32	878	229	166	636	36
RTOR Reduction (vph)	0	10	0	0	0	107	0	66	0	0	8	0
Lane Group Flow (vph)	241	14	0	160	2	16	32	1041	0	166	664	0
Turn Type	Prot			Prot		Prot	Prot			Prot		
Protected Phases	1	6		5	2	2	7	4		3	8	
Permitted Phases												
Actuated Green, G (s)	9.1	4.0		12.6	7.5	7.5	2.0	18.6		6.6	23.2	
Effective Green, g (s)	9.1	4.0		12.6	7.5	7.5	2.0	18.6		6.6	23.2	
Actuated g/C Ratio	0.16	0.07		0.22	0.13	0.13	0.03	0.32		0.11	0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	279	120		386	242	205	61	1586		202	2025	
v/s Ratio Prot	c0.14	0.01		0.09	0.00	c0.01	0.02	c0.21		c0.09	0.13	
v/s Ratio Perm												
v/c Ratio	0.86	0.11		0.41	0.01	0.08	0.52	0.66		0.82	0.33	
Uniform Delay, d1	23.7	25.2		19.4	21.9	22.1	27.4	16.9		25.0	11.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	23.1	0.4		0.7	0.0	0.2	7.9	1.0		22.8	0.1	
Delay (s)	46.8	25.7		20.2	21.9	22.3	35.3	17.8		47.8	12.0	
Level of Service	D	C		C	C	C	D	B		D	B	
Approach Delay (s)		44.9			21.1			18.3			19.1	
Approach LOS		D			C			B			B	

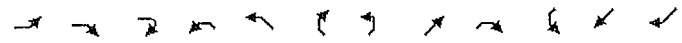
Intersection Summary				
HCM Average Control Delay	21.7	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.62			
Actuated Cycle Length (s)	57.8	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	56.8%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	316	244	127	33	102	18	97	393	40	26	457	267
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0	5.0		5.0		4.0	5.0		4.0	5.0	
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85		0.98		1.00	0.99		1.00	0.94	
Flt Protected	0.95	1.00	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583		1813		1770	3491		1770	3343	
Flt Permitted	0.95	1.00	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1583		1813		1770	3491		1770	3343	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	351	271	141	37	113	20	108	437	44	29	508	297
RTOR Reduction (vph)	0	0	76	0	7	0	0	9	0	0	101	0
Lane Group Flow (vph)	351	271	65	0	163	0	108	472	0	29	704	0
Turn Type	Prot		Prot	Split			Prot			Prot		
Protected Phases	7	4!	4!	8!	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	17.5	33.3	33.3		11.8		5.2	23.4		2.0	20.2	
Effective Green, g (s)	17.5	33.3	33.3		11.8		5.2	23.4		2.0	20.2	
Actuated g/C Ratio	0.24	0.46	0.46		0.16		0.07	0.32		0.03	0.28	
Clearance Time (s)	4.0	5.0	5.0		5.0		4.0	5.0		4.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	426	853	725		294		127	1124		49	929	
v/s Ratio Prot	c0.20	0.15	0.04		c0.09		c0.06	c0.14		0.02	c0.21	
v/s Ratio Perm												
v/c Ratio	0.82	0.32	0.09		0.56		0.85	0.42		0.59	0.76	
Uniform Delay, d1	26.1	12.5	11.1		28.0		33.4	19.3		34.9	24.0	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	12.2	0.2	0.1		2.3		38.8	0.3		17.7	3.6	
Delay (s)	38.3	12.7	11.2		30.3		72.2	19.6		52.6	27.6	
Level of Service	D	B	B		C		E	B		D	C	
Approach Delay (s)		24.2			30.3			29.2			28.5	
Approach LOS		C			C			C			C	

Intersection Summary				
HCM Average Control Delay	27.4	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.80			
Actuated Cycle Length (s)	72.7	Sum of lost time (s)	23.0	
Intersection Capacity Utilization	68.2%	ICU Level of Service	C	
Analysis Period (min)	15			

! Phase conflict between lane groups.
c Critical Lane Group



Movement	EBL	EBR	EBR2	NWL2	NWL	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	74	279	324	99	173	126	266	1065	95	168	682	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.97		0.97	0.91		1.00	0.91	
Frt	1.00	0.85	0.85	1.00	0.94		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1583	1583	1770	3290		3433	5023		1770	5039	
Flt Permitted	0.95	1.00	1.00	0.95	0.97		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1583	1583	1770	3290		3433	5023		1770	5039	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	82	310	360	110	192	140	296	1183	106	187	758	49
RTOR Reduction (vph)	0	0	261	0	127	0	0	14	0	0	10	0
Lane Group Flow (vph)	82	310	99	110	205	0	296	1275	0	187	797	0
Turn Type		Perm	Perm	Split			Prot			Prot		
Protected Phases	2			6	6		3	8		7	4	
Permitted Phases		2	2									
Actuated Green, G (s)	17.0	17.0	17.0	6.1	6.1		9.8	19.1		9.0	18.3	
Effective Green, g (s)	17.0	17.0	17.0	6.1	6.1		9.8	19.1		9.0	18.3	
Actuated g/C Ratio	0.25	0.25	0.25	0.09	0.09		0.15	0.28		0.13	0.27	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	448	400	400	161	299		501	1428		237	1372	
v/s Ratio Prot	0.05			0.06	c0.06		0.09	c0.25		c0.11	0.16	
v/s Ratio Perm		c0.20	0.06									
v/c Ratio	0.18	0.78	0.25	0.68	0.68		0.59	0.89		0.79	0.58	
Uniform Delay, d1	19.7	23.3	20.0	29.6	29.6		26.8	23.1		28.2	21.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	9.1	0.3	11.3	6.4		1.9	7.5		15.9	0.6	
Delay (s)	19.9	32.4	20.3	41.0	36.0		28.7	30.5		44.0	21.8	
Level of Service	B	C	C	D	D		C	C		D	C	
Approach Delay (s)	25.2				37.2			30.2			26.0	
Approach LOS	C				D			C			C	

Intersection Summary				
HCM Average Control Delay	28.9	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.75			
Actuated Cycle Length (s)	67.2	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	59.3%	ICU Level of Service	B	
Analysis Period (min)	15			

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	209	26	155	4	11	4	109	25	8	2	7	105
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	232	29	172	4	12	4	121	28	9	2	8	117
Direction, Lane #	SE 1	SE 2	NW 1	NE 1	SW 1							
Volume Total (vph)	261	172	21	158	127							
Volume Left (vph)	232	0	4	121	2							
Volume Right (vph)	0	172	4	9	117							
Hadj (s)	0.48	-0.67	-0.05	0.15	-0.52							
Departure Headway (s)	5.7	4.6	5.2	5.3	4.7							
Degree Utilization, x	0.42	0.22	0.03	0.23	0.17							
Capacity (veh/h)	603	752	626	640	706							
Control Delay (s)	11.6	7.7	8.4	9.9	8.6							
Approach Delay (s)	10.0		8.4	9.9	8.6							
Approach LOS	B		A	A	A							

Intersection Summary				
Delay	9.7			
HCM Level of Service	A			
Intersection Capacity Utilization	40.8%	ICU Level of Service	A	
Analysis Period (min)	15			

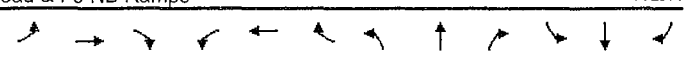
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	119	52	72	57	27	9	111	765	138	6	370	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85		0.99		1.00	0.98		1.00	0.97	
Flt Protected		0.97	1.00		0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1800	1583		1784		1770	3458		1770	3441	
Flt Permitted		0.97	1.00		0.97		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1800	1583		1784		1770	3458		1770	3441	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	132	58	80	63	30	10	123	850	153	7	411	93
RTOR Reduction (vph)	0	0	68	0	5	0	0	15	0	0	23	0
Lane Group Flow (vph)	0	190	12	0	98	0	123	988	0	7	481	0
Turn Type	Split		Prot	Split			Prot			Prot		
Protected Phases	4	4	4	8	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)		8.8	8.8		6.7		5.6	26.0		0.6	21.0	
Effective Green, g (s)		8.8	8.8		6.7		5.6	26.0		0.6	21.0	
Actuated g/C Ratio		0.15	0.15		0.12		0.10	0.45		0.01	0.36	
Clearance Time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		273	240		206		171	1547		18	1244	
v/s Ratio Prot		c0.11	0.01		c0.05		c0.07	c0.29		0.00	0.14	
v/s Ratio Perm												
v/c Ratio		0.70	0.05		0.47		0.72	0.64		0.39	0.39	
Uniform Delay, d1		23.4	21.1		24.1		25.5	12.4		28.6	13.8	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		7.5	0.1		1.7		13.5	0.9		13.4	0.2	
Delay (s)		30.9	21.2		25.8		39.0	13.3		41.9	14.0	
Level of Service		C	C		C		D	B		D	B	
Approach Delay (s)		28.0			25.8			16.1			14.4	
Approach LOS		C			C			B			B	

Intersection Summary				
HCM Average Control Delay	17.7	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.62			
Actuated Cycle Length (s)	58.1	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	50.7%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	656	141	631	916	0	0	0	0	906	1	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		0.97	0.95					0.95	0.91	0.95
Frt		0.97		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.95	1.00
Satd. Flow (prot)		3445		3433	3539					1681	1612	1504
Flt Permitted		1.00		0.95	1.00					0.95	0.95	1.00
Satd. Flow (perm)		3445		3433	3539					1681	1612	1504
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	729	157	701	1018	0	0	0	0	1007	1	83
RTOR Reduction (vph)	0	26	0	0	0	0	0	0	0	0	1	49
Lane Group Flow (vph)	0	860	0	701	1018	0	0	0	0	503	512	26
Turn Type				Prot						Split		Prot
Protected Phases		4		3	8					6	6	6
Permitted Phases												
Actuated Green, G (s)		18.4		15.4	37.8					23.7	23.7	23.7
Effective Green, g (s)		18.4		15.4	37.8					23.7	23.7	23.7
Actuated g/C Ratio		0.26		0.22	0.54					0.34	0.34	0.34
Clearance Time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		912		761	1925					573	550	513
v/s Ratio Prot		c0.25		c0.20	0.29					0.30	c0.32	0.02
v/s Ratio Perm												
v/c Ratio		0.94		0.92	0.53					0.88	0.93	0.05
Uniform Delay, d1		25.0		26.5	10.1					21.5	22.1	15.4
Progression Factor		1.00		1.00	1.00					1.00	1.00	1.00
Incremental Delay, d2		17.6		16.5	0.3					14.2	22.7	0.0
Delay (s)		42.6		42.9	10.4					35.7	44.9	15.4
Level of Service		D		D	B					D	D	B
Approach Delay (s)		42.6			23.7			0.0			38.6	
Approach LOS		D			C			A			D	

Intersection Summary				
HCM Average Control Delay	32.6	HCM Level of Service		C
HCM Volume to Capacity ratio	0.93			
Actuated Cycle Length (s)	69.5	Sum of lost time (s)		12.0
Intersection Capacity Utilization	87.5%	ICU Level of Service		E
Analysis Period (min)	15			
c Critical Lane Group				



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	127	1459	0	0	1051	872	452	7	700	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	0.97	0.95			0.95	1.00	0.95	0.91	0.95			
Frt	1.00	1.00			1.00	0.85	1.00	0.87	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99	1.00			
Satd. Flow (prot)	3433	3539			3539	1583	1681	1469	1504			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99	1.00			
Satd. Flow (perm)	3433	3539			3539	1583	1681	1469	1504			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	141	1621	0	0	1168	969	502	8	778	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	524	0	11	11	0	0	0
Lane Group Flow (vph)	141	1621	0	0	1168	445	447	410	409	0	0	0
Turn Type	Prot					Prot	Split		Prot			
Protected Phases	7	4			8	8	2	2	2			
Permitted Phases												
Actuated Green, G (s)	3.5	31.6			24.1	24.1	19.5	19.5	19.5			
Effective Green, g (s)	3.5	31.6			24.1	24.1	19.5	19.5	19.5			
Actuated g/C Ratio	0.06	0.53			0.41	0.41	0.33	0.33	0.33			
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0			
Lane Grp Cap (vph)	203	1892			1443	646	555	485	496			
v/s Ratio Prot	0.04	c0.46			0.33	0.28	0.27	c0.28	0.27			
v/s Ratio Perm												
v/c Ratio	0.69	0.86			0.81	0.69	0.81	0.85	0.83			
Uniform Delay, d1	27.3	11.8			15.5	14.4	18.1	18.4	18.2			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	9.9	4.1			3.5	3.1	8.3	12.8	10.7			
Delay (s)	37.1	15.9			18.9	17.5	26.4	31.2	29.0			
Level of Service	D	B			B	B	C	C	C			
Approach Delay (s)		17.6			18.3			28.8			0.0	
Approach LOS		B			B			C			A	

Intersection Summary				
HCM Average Control Delay	20.7	HCM Level of Service		C
HCM Volume to Capacity ratio	0.85			
Actuated Cycle Length (s)	59.1	Sum of lost time (s)		8.0
Intersection Capacity Utilization	87.5%	ICU Level of Service		E
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	37	50	490	31	118	109	991	220	197	1520	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.95	0.91	0.95	0.95	0.91	0.95	1.00	0.91		1.00	0.91	
Frt	1.00	0.98	0.85	1.00	0.99	0.85	1.00	0.97		1.00	1.00	
Flt Protected	0.95	0.99	1.00	0.95	0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1681	1649	1504	1681	1616	1504	1770	4947		1770	5064	
Flt Permitted	0.95	0.99	1.00	0.95	0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1681	1649	1504	1681	1616	1504	1770	4947		1770	5064	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	56	41	56	544	34	131	121	1101	244	219	1689	48
RTOR Reduction (vph)	0	7	44	0	2	92	0	37	0	0	3	0
Lane Group Flow (vph)	50	48	4	294	295	26	121	1308	0	219	1734	0
Turn Type	Split		Prot	Split		Prot	Prot			Prot		
Protected Phases	4	4	4	8	8	8	5	2		1		
Permitted Phases											6	
Actuated Green, G (s)	6.5	6.5	6.5	17.4	17.4	17.4	7.5	27.5		12.3	32.3	
Effective Green, g (s)	6.5	6.5	6.5	17.4	17.4	17.4	7.5	27.5		12.3	32.3	
Actuated g/C Ratio	0.08	0.08	0.08	0.22	0.22	0.22	0.09	0.35		0.15	0.41	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	137	134	123	367	353	328	167	1707		273	2052	
v/s Ratio Prot	c0.03	0.03	0.00	0.17	c0.18	0.02	0.07	0.26		c0.12		
v/s Ratio Perm											c0.34	
v/c Ratio	0.36	0.36	0.03	0.80	0.84	0.08	0.72	0.77		0.80	0.85	
Uniform Delay, d1	34.6	34.6	33.7	29.5	29.8	24.8	35.1	23.2		32.5	21.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.7	1.6	0.1	11.9	15.7	0.1	14.4	2.1		15.5	3.4	
Delay (s)	36.3	36.2	33.8	41.4	45.5	24.9	49.5	25.4		48.0	24.8	
Level of Service	D	D	C	D	D	C	D	C		D	C	
Approach Delay (s)		35.5			40.4			27.4			27.4	
Approach LOS		D			D			C			C	

Intersection Summary				
HCM Average Control Delay	29.8	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.77			
Actuated Cycle Length (s)	79.7	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	68.6%	ICU Level of Service	C	
Analysis Period (min)	15			

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	223	860	220	405	1099	0	0	752	837
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0	4.0	4.0	4.0	4.0			4.0	4.0
Lane Util. Factor				0.97	0.91	1.00	0.97	0.95			0.86	0.86
Frpb, ped/bikes				1.00	1.00	1.00	1.00	1.00			0.91	1.00
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00			1.00	1.00
Frt				1.00	1.00	0.85	1.00	1.00			0.95	0.85
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				3433	5085	1583	3433	3539			4144	1362
Flt Permitted				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)				3433	5085	1583	3433	3539			4144	1362
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	248	956	244	450	1221	0	0	836	930
RTOR Reduction (vph)	0	0	0	0	0	60	0	0	0	0	7	7
Lane Group Flow (vph)	0	0	0	248	956	184	450	1221	0	0	1294	458
Confl. Peds. (#/hr)												200
Turn Type				Split		Prot	Prot					Prot
Protected Phases				8	8	8	5	2			6	6
Permitted Phases												
Actuated Green, G (s)				16.4	16.4	16.4	10.0	40.0			26.0	26.0
Effective Green, g (s)				16.4	16.4	16.4	10.0	40.0			26.0	26.0
Actuated g/C Ratio				0.25	0.25	0.25	0.16	0.62			0.40	0.40
Clearance Time (s)				4.0	4.0	4.0	4.0	4.0			4.0	4.0
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)				874	1295	403	533	2198			1673	550
v/s Ratio Prot				0.07	c0.19	0.12	c0.13	0.34			0.31	c0.34
v/s Ratio Perm												
v/c Ratio				0.28	0.74	0.46	0.84	0.56			0.77	0.83
Uniform Delay, d1				19.3	22.0	20.2	26.4	7.1			16.6	17.3
Progression Factor				1.00	1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2				0.2	2.2	0.8	11.7	0.3			2.3	10.5
Delay (s)				19.5	24.3	21.1	38.1	7.4			18.9	27.7
Level of Service				B	C	C	D	A			B	C
Approach Delay (s)		0.0			22.9			15.6			21.3	
Approach LOS		A			C			B			C	

Intersection Summary				
HCM Average Control Delay	19.8	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.81			
Actuated Cycle Length (s)	64.4	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	114.1%	ICU Level of Service	H	
Analysis Period (min)	15			

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	537	1031	133	0	0	0	0	915	442	286	646	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Lane Util. Factor	0.91	0.86	0.91					0.86		1.00	0.91	
Frt	1.00	1.00	0.85					0.95		1.00	1.00	
Flt Protected	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	1610	3190	1441					6095		1770	5085	
Flt Permitted	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	1610	3190	1441					6095		1770	5085	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	597	1146	148	0	0	0	0	1017	491	318	718	0
RTOR Reduction (vph)	0	1	80	0	0	0	0	41	0	0	0	0
Lane Group Flow (vph)	537	1220	53	0	0	0	0	1467	0	318	718	0
Turn Type	Split		Prot							Prot		
Protected Phases	4	4	4					2		1	6	
Permitted Phases												
Actuated Green, G (s)	31.6	31.6	31.6					20.8		15.6	40.4	
Effective Green, g (s)	31.6	31.6	31.6					20.8		15.6	40.4	
Actuated g/C Ratio	0.40	0.40	0.40					0.26		0.20	0.50	
Clearance Time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	636	1260	569					1585		345	2568	
v/s Ratio Prot	0.33	c0.38	0.04					c0.24		c0.18	0.14	
v/s Ratio Perm												
v/c Ratio	0.84	0.97	0.09					1.07dr		0.92	0.28	
Uniform Delay, d1	22.0	23.7	15.2					28.8		31.6	11.4	
Progression Factor	1.00	1.00	1.00					1.00		1.00	1.00	
Incremental Delay, d2	10.0	18.0	0.1					9.5		29.3	0.1	
Delay (s)	32.0	41.7	15.3					38.4		60.9	11.5	
Level of Service	C	D	B					D		E	B	
Approach Delay (s)		37.1			0.0			38.4			26.6	
Approach LOS		D			A			D			C	

Intersection Summary				
HCM Average Control Delay	35.1	HCM Level of Service	D	
HCM Volume to Capacity ratio	0.94			
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	114.1%	ICU Level of Service	H	
Analysis Period (min)	15			

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group

Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Volume (vph)	68	398	0	370	97	31	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		0.95		1.00	1.00
Frt	1.00	1.00		0.97		1.00	0.85
Flt Protected	0.95	1.00		1.00		0.95	1.00
Satd. Flow (prot)	1770	3539		3429		1770	1583
Flt Permitted	0.95	1.00		1.00		0.95	1.00
Satd. Flow (perm)	1770	3539		3429		1770	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	76	442	0	411	108	34	52
RTOR Reduction (vph)	0	0	0	46	0	0	46
Lane Group Flow (vph)	76	442	0	473	0	34	6
Turn Type	Prot		Prot				Prot
Protected Phases	7	4	3	8		6	6
Permitted Phases							
Actuated Green, G (s)	1.3	13.6		8.3		3.0	3.0
Effective Green, g (s)	1.3	13.6		8.3		3.0	3.0
Actuated g/C Ratio	0.05	0.55		0.34		0.12	0.12
Clearance Time (s)	4.0	4.0		4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0		3.0	3.0
Lane Grp Cap (vph)	94	1957		1157		216	193
v/s Ratio Prot	c0.04	0.12		c0.14		c0.02	0.00
v/s Ratio Perm							
v/c Ratio	0.81	0.23		0.41		0.16	0.03
Uniform Delay, d1	11.5	2.8		6.3		9.7	9.5
Progression Factor	1.00	1.00		1.00		1.00	1.00
Incremental Delay, d2	38.1	0.1		0.2		0.3	0.1
Delay (s)	49.6	2.9		6.5		10.0	9.6
Level of Service	D	A		A		B	A
Approach Delay (s)		9.7		6.5		9.8	
Approach LOS		A		A		A	

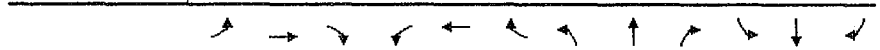
Intersection Summary			
HCM Average Control Delay	8.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	24.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	30.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	EBR2	WBL	WBT	WBR	NBL	NBT	NBR2	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	118	293	331	126	162	99	370	841	332	272	166	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.88	1.00	1.00	1.00		1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.85	0.85	1.00	0.94		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	2787	1583	1770	1757		1770	3539	1583	3433	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	2787	1583	1770	1757		1770	3539	1583	3433	3539	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	131	326	368	140	180	110	411	934	369	302	184	160
RTOR Reduction (vph)	0	0	302	0	26	0	0	0	241	0	0	128
Lane Group Flow (vph)	131	326	66	140	264	0	411	934	128	302	184	32
Turn Type	Prot	custom	custom	Prot			Prot		Prot	Prot		Prot
Protected Phases	7			3	8		5	2	2	1	6	6
Permitted Phases		4	4									
Actuated Green, G (s)	8.8	14.3	14.3	11.7	17.2		22.0	27.8	27.8	10.4	16.2	16.2
Effective Green, g (s)	8.8	14.3	14.3	11.7	17.2		22.0	27.8	27.8	10.4	16.2	16.2
Actuated g/C Ratio	0.11	0.18	0.18	0.15	0.21		0.27	0.35	0.35	0.13	0.20	0.20
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	194	497	282	258	377		486	1227	549	445	715	320
v/s Ratio Prot	c0.07			0.08	c0.15		c0.23	c0.26	0.08	0.09	0.05	0.02
v/s Ratio Perm		0.12	0.04									
v/c Ratio	0.68	0.66	0.23	0.54	0.70		0.85	0.76	0.23	0.68	0.26	0.10
Uniform Delay, d1	34.3	30.7	28.2	31.8	29.1		27.5	23.3	18.6	33.3	26.9	26.1
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	8.9	3.1	0.4	2.3	5.8		12.8	2.8	0.2	4.1	0.2	0.1
Delay (s)	43.3	33.8	28.7	34.1	34.9		40.3	26.1	18.8	37.4	27.1	26.2
Level of Service	D	C	C	C	C		D	C	B	D	C	C
Approach Delay (s)					34.6			27.9			31.7	
Approach LOS					C			C			C	

Intersection Summary				
HCM Average Control Delay	30.6	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.75			
Actuated Cycle Length (s)	80.2	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	65.4%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				



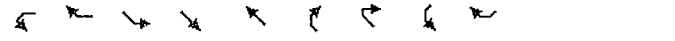
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	935	0	221	0	0	0	0	658	213	358	258	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95	1.00					0.95		0.97	0.95	
Frt	1.00	1.00	0.85					0.96		1.00	1.00	
Flt Protected	0.95	0.95	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	1681	1681	1583					3409		3433	3539	
Flt Permitted	0.95	0.95	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	1681	1681	1583					3409		3433	3539	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1039	0	246	0	0	0	0	731	237	398	287	0
RTOR Reduction (vph)	0	0	160	0	0	0	0	48	0	0	0	0
Lane Group Flow (vph)	519	520	86	0	0	0	0	920	0	398	287	0
Turn Type	Split		Prot							Prot		
Protected Phases	4	4	4					2		1	6	
Permitted Phases												
Actuated Green, G (s)	22.2	22.2	22.2					20.3		9.0	33.3	
Effective Green, g (s)	22.2	22.2	22.2					20.3		9.0	33.3	
Actuated g/C Ratio	0.35	0.35	0.35					0.32		0.14	0.52	
Clearance Time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	588	588	553					1090		487	1856	
v/s Ratio Prot	0.31	c0.31	0.05					c0.27		c0.12	0.08	
v/s Ratio Perm												
v/c Ratio	0.88	0.88	0.16					0.84		0.82	0.15	
Uniform Delay, d1	19.4	19.4	14.2					20.1		26.5	7.8	
Progression Factor	1.00	1.00	1.00					1.00		1.00	1.00	
Incremental Delay, d2	14.6	14.7	0.1					6.1		10.2	0.0	
Delay (s)	34.0	34.2	14.3					26.2		36.7	7.9	
Level of Service	C	C	B					C		D	A	
Approach Delay (s)		30.3			0.0			26.2			24.6	
Approach LOS		C			A			C			C	

Intersection Summary				
HCM Average Control Delay	27.6	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.86			
Actuated Cycle Length (s)	63.5	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	71.1%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	131	471	44	94	418	412	53	132	107	237	54	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		0.97	1.00	
Frt	1.00	0.99		1.00	0.93		1.00	0.93		1.00	0.92	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3494		1770	3276		1770	1738		3433	1708	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3494		1770	3276		1770	1738		3433	1708	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	146	523	49	104	464	458	59	147	119	263	60	74
RTOR Reduction (vph)	0	10	0	0	267	0	0	46	0	0	51	0
Lane Group Flow (vph)	146	562	0	104	655	0	59	220	0	263	83	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												
Actuated Green, G (s)	6.1	16.5		5.0	15.4		4.6	13.7		9.5	18.6	
Effective Green, g (s)	6.1	16.5		5.0	15.4		4.6	13.7		9.5	18.6	
Actuated g/C Ratio	0.10	0.27		0.08	0.25		0.08	0.23		0.16	0.31	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	178	950		146	831		134	392		537	523	
v/s Ratio Prot	c0.08	0.16		0.06	c0.20		0.03	c0.13		c0.08	0.05	
v/s Ratio Perm												
v/c Ratio	0.82	0.59		0.71	0.79		0.44	0.56		0.49	0.16	
Uniform Delay, d1	26.8	19.2		27.1	21.1		26.8	20.8		23.4	15.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	25.1	1.0		15.1	5.0		2.3	1.8		0.7	0.1	
Delay (s)	51.8	20.2		42.3	26.1		29.1	22.7		24.1	15.5	
Level of Service	D	C		D	C		C	C		C	B	
Approach Delay (s)		26.6			27.8			23.8			21.2	
Approach LOS		C			C			C			C	

Intersection Summary				
HCM Average Control Delay	25.8	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.66			
Actuated Cycle Length (s)	60.7	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	65.6%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	WBL	WBR	SEL	SET	NWT	NWR	NWR2	SWL	SWR
Lane Configurations									
Volume (vph)	0	0	277	508	640	0	196	151	264
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor			0.97	0.95	0.95		1.00	0.97	1.00
Frt			1.00	1.00	1.00		0.85	1.00	0.85
Flt Protected			0.95	1.00	1.00		1.00	0.95	1.00
Satd. Flow (prot)			3433	3539	3539		1583	3433	1583
Flt Permitted			0.95	1.00	1.00		1.00	0.95	1.00
Satd. Flow (perm)			3433	3539	3539		1583	3433	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	308	564	711	0	218	168	293
RTOR Reduction (vph)	0	0	0	0	0	0	136	0	208
Lane Group Flow (vph)	0	0	308	564	711	0	82	168	85
Turn Type			Prot				Perm		Perm
Protected Phases			5	2	6			4	
Permitted Phases							6		4
Actuated Green, G (s)			4.1	22.8	14.7		14.7	8.2	8.2
Effective Green, g (s)			4.1	22.8	14.7		14.7	8.2	8.2
Actuated g/C Ratio			0.11	0.58	0.38		0.38	0.21	0.21
Clearance Time (s)			4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)			3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)			361	2069	1334		597	722	333
v/s Ratio Prot			c0.09	0.16	c0.20			0.05	
v/s Ratio Perm							0.05		c0.05
v/c Ratio			0.85	0.27	0.53		0.14	0.23	0.26
Uniform Delay, d1			17.2	4.0	9.5		8.0	12.8	12.9
Progression Factor			1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2			17.4	0.1	0.4		0.1	0.2	0.4
Delay (s)			34.6	4.1	9.9		8.1	13.0	13.3
Level of Service			C	A	A		A	B	B
Approach Delay (s)	0.0			14.8	9.5			13.2	
Approach LOS	A			B	A			B	

Intersection Summary				
HCM Average Control Delay	12.3	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.50			
Actuated Cycle Length (s)	39.0	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	40.7%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL2	EBL	EBR	SEL	SET	SER	NWL	NWT	NWR	SWL	SWR
Lane Configurations											
Volume (vph)	411	0	248	284	386	0	0	413	263	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		
Lane Util. Factor	0.95	0.95	1.00	0.97	0.95			0.95	1.00		
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		
Flt Protected	0.95	0.95	1.00	0.95	1.00			1.00	1.00		
Satd. Flow (prot)	1681	1681	1583	3433	3539			3539	1583		
Flt Permitted	0.95	0.95	1.00	0.95	1.00			1.00	1.00		
Satd. Flow (perm)	1681	1681	1583	3433	3539			3539	1583		
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	457	0	276	316	429	0	0	459	292	0	0
RTOR Reduction (vph)	0	0	200	0	0	0	0	0	205	0	0
Lane Group Flow (vph)	228	229	76	316	429	0	0	459	87	0	0
Turn Type	Split		Prot	Prot					Prot		
Protected Phases	4	4	4	1	6			2	2		
Permitted Phases											
Actuated Green, G (s)	11.2	11.2	11.2	5.2	21.3			12.1	12.1		
Effective Green, g (s)	11.2	11.2	11.2	5.2	21.3			12.1	12.1		
Actuated g/C Ratio	0.28	0.28	0.28	0.13	0.53			0.30	0.30		
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0		
Lane Grp Cap (vph)	465	465	438	441	1861			1057	473		
v/s Ratio Prot	0.14	c0.14	0.05	c0.09	0.12			c0.13	0.06		
v/s Ratio Perm											
v/c Ratio	0.49	0.49	0.17	0.72	0.23			0.43	0.18		
Uniform Delay, d1	12.3	12.3	11.1	16.9	5.2			11.4	10.5		
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00	1.00		
Incremental Delay, d2	0.8	0.8	0.2	5.5	0.1			0.3	0.2		
Delay (s)	13.1	13.1	11.3	22.4	5.2			11.7	10.7		
Level of Service	B	B	B	C	A			B	B		
Approach Delay (s)		12.4			12.5			11.3		0.0	
Approach LOS		B			B			B		A	

Intersection Summary			
HCM Average Control Delay	12.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	40.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	40.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

ALL-WAY STOP CONTROL ANALYSIS

General Information		Site Information	
Analyst	Jacob Swim	Intersection	Carmel Creek Rd./Del Mar Trail
Agency/Co.	USAI	Jurisdiction	City of San Diego
Date Performed	3/25/2011	Analysis Year	2011
Analysis Time Period	36 NT+P PM (Phase 1&2)		

Project ID 002407 - San Diego Corporate Center Lots

East/West Street: Del Mar Trail North/South Street: Carmel Creek Road

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	5	5	4	57	12	10
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	12	778	103	15	440	10
%Thrus Left Lane	50			50		

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		LTR		LT	TR	LT	TR
PHF	0.90		0.90		0.90	0.90	0.90	0.90
Flow Rate (veh/h)	14		87		445	546	260	255
% Heavy Vehicles	2		2		2	2	2	2
No. Lanes	1		1		2		2	
Geometry Group	2		2		5		5	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Prop. Left-Turns	0.4		0.7		0.0	0.0	0.1	0.0
Prop. Right-Turns	0.3		0.1		0.0	0.2	0.0	0.0
Prop. Heavy Vehicle	0.0		0.0		0.0	0.0	0.0	0.0
hLT-adj	0.2	0.2	0.2	0.2	0.5	0.5	0.5	0.5
hRT-adj	-0.6	-0.6	-0.6	-0.6	-0.7	-0.7	-0.7	-0.7
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	-0.1		0.1		0.0	-0.1	0.1	0.0

Departure Headway and Service Time

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
hd, initial value (s)	3.20		3.20		3.20	3.20	3.20	3.20
x, initial	0.01		0.08		0.40	0.49	0.23	0.23
hd, final value (s)	6.76		6.65		5.54	5.38	6.10	6.04
x, final value	0.03		0.16		0.68	0.82	0.44	0.43
Move-up time, m (s)	2.0		2.0		2.3		2.3	
Service Time, l_s (s)	4.8		4.6		3.2	3.1	3.8	3.7

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	264		337		645	666	510	505
Delay (s/veh)	9.95		10.91		19.39	27.37	13.51	13.17
LOS	A		B		C	D	B	B
Approach: Delay (s/veh)	9.95		10.91		23.78		13.34	
LOS	A		B		C		B	
Intersection Delay (s/veh)	19.62							
Intersection LOS	C							

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	378	391	313	507	8	400	5	163	1	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.95	1.00		0.98	
Satd. Flow (prot)	1770	1863	1583	1770	1858			1775	1583		1750	
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.95	1.00		0.98	
Satd. Flow (perm)	1770	1863	1583	1770	1858			1775	1583		1750	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	2	420	434	348	563	9	444	6	181	1	1	1
RTOR Reduction (vph)	0	0	238	0	0	0	0	0	128	0	1	0
Lane Group Flow (vph)	2	420	196	348	572	0	0	450	53	0	2	0
Turn Type	Prot		Prot	Prot			Split		Prot	Split		
Protected Phases	7	4	4	3	8		2	2	2	6	6	
Permitted Phases												
Actuated Green, G (s)	0.8	25.8	25.8	19.6	44.6			25.6	25.6		1.1	
Effective Green, g (s)	0.8	25.8	25.8	19.6	44.6			25.6	25.6		1.1	
Actuated g/C Ratio	0.01	0.29	0.29	0.22	0.51			0.29	0.29		0.01	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	16	546	464	394	941			516	460		22	
v/s Ratio Prot	0.00	c0.23	0.12	c0.20	0.31			c0.25	0.03		c0.00	
v/s Ratio Perm												
v/c Ratio	0.12	0.77	0.42	0.88	0.61			0.87	0.11		0.09	
Uniform Delay, d1	43.3	28.4	25.1	33.1	15.5			29.7	22.9		43.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	3.5	6.5	0.6	20.2	1.1			15.0	0.1		1.8	
Delay (s)	46.8	34.9	25.8	53.3	16.6			44.6	23.0		44.8	
Level of Service	D	C	C	D	B			D	C		D	
Approach Delay (s)		30.3			30.5			38.4			44.8	
Approach LOS		C			C			D			D	

Intersection Summary				
HCM Average Control Delay	32.5	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.83			
Actuated Cycle Length (s)	88.1	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	76.3%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Volume (vph)	409	308	0	210	296	289	448
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00		1.00	1.00	1.00	0.95
Frt	1.00	0.85		1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00		1.00	1.00	0.95	1.00
Satd. Flow (prot)	3433	1583		1863	1583	1770	3539
Flt Permitted	0.95	1.00		1.00	1.00	0.95	1.00
Satd. Flow (perm)	3433	1583		1863	1583	1770	3539
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	454	342	0	233	329	321	498
RTOR Reduction (vph)	0	256	0	0	250	0	0
Lane Group Flow (vph)	454	86	0	233	79	321	498
Turn Type		Perm	Prot		Perm	Prot	
Protected Phases	1		3	8		7	
Permitted Phases		1			8		6
Actuated Green, G (s)	13.1	13.1		12.5	12.5	14.3	13.1
Effective Green, g (s)	13.1	13.1		12.5	12.5	14.3	13.1
Actuated g/C Ratio	0.25	0.25		0.24	0.24	0.28	0.25
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	867	400		449	381	488	893
v/s Ratio Prot	0.13			c0.13		c0.18	
v/s Ratio Perm		0.05			0.05		c0.14
v/c Ratio	0.52	0.22		0.52	0.21	0.66	0.56
Uniform Delay, d1	16.7	15.3		17.1	15.7	16.6	16.9
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.6	0.3		1.0	0.3	3.2	0.8
Delay (s)	17.3	15.6		18.1	16.0	19.8	17.6
Level of Service	B	B		B	B	B	B
Approach Delay (s)	16.6			16.9			18.5
Approach LOS	B			B			B

Intersection Summary				
HCM Average Control Delay	17.4	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.58			
Actuated Cycle Length (s)	51.9	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	48.7%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Volume (vph)	87	7	0	476	52	3	866
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0		4.0	4.0
Lane Util. Factor	0.97			0.95		1.00	0.95
Frt	0.99			0.99		1.00	1.00
Flt Protected	0.96			1.00		0.95	1.00
Satd. Flow (prot)	3415			3487		1770	3539
Flt Permitted	0.96			1.00		0.95	1.00
Satd. Flow (perm)	3415			3487		1770	3539
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	97	8	0	529	58	3	962
RTOR Reduction (vph)	7	0	0	13	0	0	0
Lane Group Flow (vph)	98	0	0	574	0	3	962
Turn Type			Prot			Prot	
Protected Phases	8		5	2		1	6
Permitted Phases							
Actuated Green, G (s)	3.2			15.6		0.6	20.2
Effective Green, g (s)	3.2			15.6		0.6	20.2
Actuated g/C Ratio	0.10			0.50		0.02	0.64
Clearance Time (s)	4.0			4.0		4.0	4.0
Vehicle Extension (s)	3.0			3.0		3.0	3.0
Lane Grp Cap (vph)	348			1732		34	2277
v/s Ratio Prot	c0.03			0.16		0.00	c0.27
v/s Ratio Perm							
v/c Ratio	0.28			0.33		0.09	0.42
Uniform Delay, d1	13.0			4.8		15.1	2.7
Progression Factor	1.00			1.00		1.00	1.00
Incremental Delay, d2	0.4			0.1		1.1	0.1
Delay (s)	13.5			4.9		16.3	2.9
Level of Service	B			A		B	A
Approach Delay (s)	13.5			4.9			2.9
Approach LOS	B			A			A

Intersection Summary			
HCM Average Control Delay	4.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	31.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	24	114	20	67	84	153	6	329	18	165	711	107
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	0.90		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1821		1770	1682		1770	3512		1770	3470	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1821		1770	1682		1770	3512		1770	3470	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	127	22	74	93	170	7	366	20	183	790	119
RTOR Reduction (vph)	0	11	0	0	113	0	0	6	0	0	17	0
Lane Group Flow (vph)	27	138	0	74	150	0	7	380	0	183	892	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	0.7	10.8		2.3	12.4		0.7	14.5		6.3	20.1	
Effective Green, g (s)	0.7	10.8		2.3	12.4		0.7	14.5		6.3	20.1	
Actuated g/C Ratio	0.01	0.22		0.05	0.25		0.01	0.29		0.13	0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	25	394		82	418		25	1021		223	1398	
v/s Ratio Prot	0.02	0.08		c0.04	c0.09		0.00	0.11		c0.10	c0.26	
v/s Ratio Perm												
v/c Ratio	1.08	0.35		0.90	0.36		0.28	0.37		0.82	0.64	
Uniform Delay, d1	24.6	16.6		23.7	15.5		24.4	14.1		21.2	12.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	205.9	0.5		67.3	0.5		6.0	0.2		20.9	1.0	
Delay (s)	230.5	17.1		91.0	16.0		30.4	14.3		42.1	12.9	
Level of Service	F	B		F	B		C	B		D	B	
Approach Delay (s)		49.9			32.5			14.6			17.8	
Approach LOS		D			C			B			B	

Intersection Summary			
HCM Average Control Delay	22.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	49.9	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	85	72	98	141	37	41	351	59	42	803	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.97		1.00	0.98		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1805		1770	3462		1770	3534	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1583	1770	1805		1770	3462		1770	3534	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	6	94	80	109	157	41	46	390	66	47	892	8
RTOR Reduction (vph)	0	0	66	0	17	0	0	20	0	0	1	0
Lane Group Flow (vph)	6	94	15	109	181	0	46	436	0	47	899	0
Turn Type	Prot		Prot	Prot			Prot			Prot		
Protected Phases	7	4	4	3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	0.6	8.7	8.7	3.5	11.6		1.4	18.4		1.4	18.4	
Effective Green, g (s)	0.6	8.7	8.7	3.5	11.6		1.4	18.4		1.4	18.4	
Actuated g/C Ratio	0.01	0.18	0.18	0.07	0.24		0.03	0.38		0.03	0.38	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	22	338	287	129	436		52	1327		52	1355	
v/s Ratio Prot	0.00	0.05	0.01	c0.06	c0.10		0.03	0.13		c0.03	c0.25	
v/s Ratio Perm												
v/c Ratio	0.27	0.28	0.05	0.84	0.42		0.88	0.33		0.90	0.66	
Uniform Delay, d1	23.5	16.9	16.2	22.0	15.3		23.2	10.4		23.2	12.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	6.6	0.5	0.1	37.0	0.6		82.7	0.1		89.2	1.2	
Delay (s)	30.1	17.4	16.3	59.0	16.0		105.9	10.6		112.5	13.5	
Level of Service	C	B	B	E	B		F	B		F	B	
Approach Delay (s)		17.3			31.2			19.3			18.4	
Approach LOS		B			C			B			B	

Intersection Summary				
HCM Average Control Delay	20.6	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.63			
Actuated Cycle Length (s)	48.0	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	47.8%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	96	887	24	99	891	212	70	58	92	465	23	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.95			1.00	1.00	0.95	0.95	
Frt	1.00	1.00		1.00	0.97			1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00	0.95	0.97	
Satd. Flow (prot)	1770	5065		1770	3437			1813	1583	1681	1639	
Flt Permitted	0.95	1.00		0.95	1.00			0.97	1.00	0.95	0.97	
Satd. Flow (perm)	1770	5065		1770	3437			1813	1583	1681	1639	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	107	986	27	110	990	236	78	64	102	517	26	93
RTOR Reduction (vph)	0	3	0	0	22	0	0	0	88	0	17	0
Lane Group Flow (vph)	107	1010	0	110	1204	0	0	142	14	326	293	0
Turn Type	Prot			Prot			Split		Prot	Split		
Protected Phases	7	4		3	8		2	2	2	6	6	
Permitted Phases												
Actuated Green, G (s)	6.6	30.8		8.6	32.8			11.8	11.8	18.5	18.5	
Effective Green, g (s)	6.6	30.8		8.6	32.8			11.8	11.8	18.5	18.5	
Actuated g/C Ratio	0.08	0.36		0.10	0.38			0.14	0.14	0.22	0.22	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	136	1820		178	1315			250	218	363	354	
v/s Ratio Prot	c0.06	0.20		0.06	c0.35			c0.08	0.01	c0.19	0.18	
v/s Ratio Perm												
v/c Ratio	0.79	0.56		0.62	0.92			0.57	0.06	0.90	0.83	
Uniform Delay, d1	38.9	22.0		37.0	25.1			34.6	32.1	32.7	32.1	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2	25.2	0.4		6.3	10.0			2.9	0.1	23.7	14.6	
Delay (s)	64.1	22.3		43.2	35.2			37.5	32.3	56.4	46.6	
Level of Service	E	C		D	D			D	C	E	D	
Approach Delay (s)		26.3			35.8			35.3			51.7	
Approach LOS		C			D			D			D	

Intersection Summary				
HCM Average Control Delay	35.6	HCM Level of Service	D	
HCM Volume to Capacity ratio	0.79			
Actuated Cycle Length (s)	85.7	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	69.4%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑			↑↑		↱
Volume (veh/h)	1457	55	0	1424	0	142
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	1619	61	0	1582	0	158
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	575			607		
pX, platoon unblocked			0.86		0.81	0.86
vC, conflicting volume			1680		2441	570
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1218		1273	0
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	83
cM capacity (veh/h)			488		129	932

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1
Volume Total	648	648	385	791	791	158
Volume Left	0	0	0	0	0	0
Volume Right	0	0	61	0	0	158
cSH	1700	1700	1700	1700	1700	932
Volume to Capacity	0.38	0.38	0.23	0.47	0.47	0.17
Queue Length 95th (ft)	0	0	0	0	0	15
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	9.7
Lane LOS						A
Approach Delay (s)	0.0			0.0		9.7
Approach LOS						A

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	44.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↰↑↑	↱
Volume (vph)	0	813	1081	0	1023	336
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		0.97	0.91
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3539	3539		3431	1441
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3539	3539		3431	1441
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	903	1201	0	1137	373
RTOR Reduction (vph)	0	0	0	0	2	17
Lane Group Flow (vph)	0	903	1201	0	1172	319
Turn Type						Prot
Protected Phases		4	8		6	6
Permitted Phases						
Actuated Green, G (s)		50.4	50.4		61.6	61.6
Effective Green, g (s)		50.4	50.4		61.6	61.6
Actuated g/C Ratio		0.42	0.42		0.51	0.51
Clearance Time (s)		4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1486	1486		1761	740
v/s Ratio Prot		0.26	c0.34		c0.34	0.22
v/s Ratio Perm						
v/c Ratio		0.61	0.81		0.67	0.43
Uniform Delay, d1		27.1	30.6		21.6	18.3
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		0.7	3.3		2.0	1.8
Delay (s)		27.8	33.9		23.6	20.1
Level of Service		C	C		C	C
Approach Delay (s)		27.8	33.9		22.8	
Approach LOS		C	C		C	

Intersection Summary				
HCM Average Control Delay	27.7	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.73			
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	123.3%	ICU Level of Service	H	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	231	1526	0	0	1615	963	384	59	1106	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	0.97	0.95			0.91	1.00	0.95	0.91	0.95			
Frt	1.00	1.00			1.00	0.85	1.00	0.87	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (prot)	3433	3539			5085	1583	1681	1477	1504			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (perm)	3433	3539			5085	1583	1681	1477	1504			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	243	1606	0	0	1700	1014	404	62	1164	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	439	0	9	9	0	0	0
Lane Group Flow (vph)	243	1606	0	0	1700	575	364	628	620	0	0	0
Turn Type	Prot					Prot	Prot		Prot			
Protected Phases	7	4			8	8	5	2	2			
Permitted Phases												
Actuated Green, G (s)	9.8	61.8			48.0	48.0	50.2	50.2	50.2			
Effective Green, g (s)	9.8	61.8			48.0	48.0	50.2	50.2	50.2			
Actuated g/C Ratio	0.08	0.52			0.40	0.40	0.42	0.42	0.42			
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0			
Lane Grp Cap (vph)	280	1823			2034	633	703	618	629			
v/s Ratio Prot	0.07	c0.45			0.33	0.36	0.22	c0.43	0.41			
v/s Ratio Perm												
v/c Ratio	0.87	0.88			0.84	0.91	0.52	1.02	0.99			
Uniform Delay, d1	54.5	25.8			32.4	33.9	25.9	34.9	34.6			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	23.5	5.4			3.1	16.8	0.6	40.4	32.1			
Delay (s)	77.9	31.2			35.6	50.7	26.6	75.3	66.6			
Level of Service	E	C			D	D	C	E	E			
Approach Delay (s)		37.3			41.2			61.1			0.0	
Approach LOS		D			D			E			A	

Intersection Summary				
HCM Average Control Delay	45.3	HCM Level of Service	D	
HCM Volume to Capacity ratio	0.94			
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	99.7%	ICU Level of Service	F	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	111	1817	694	110	2055	76	201	10	45	113	59	312
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		0.97	0.95		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.88		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5058		3433	3104		1770	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5058		3433	3104		1770	1863	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	123	2019	771	122	2283	84	223	11	50	126	66	347
RTOR Reduction (vph)	0	0	359	0	4	0	0	43	0	0	0	126
Lane Group Flow (vph)	123	2019	412	122	2363	0	223	18	0	126	66	221
Turn Type	Prot		Perm	Prot			Prot			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									6
Actuated Green, G (s)	7.6	41.3	41.3	8.6	42.3		6.9	12.6		10.1	15.8	15.8
Effective Green, g (s)	7.6	41.3	41.3	8.6	42.3		6.9	12.6		10.1	15.8	15.8
Actuated g/C Ratio	0.09	0.47	0.47	0.10	0.48		0.08	0.14		0.11	0.18	0.18
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	152	2370	738	172	2415		267	441		202	332	282
v/s Ratio Prot	c0.07	0.40		0.07	c0.47		c0.06	0.01		0.07	0.04	
v/s Ratio Perm			0.26									c0.14
v/c Ratio	0.81	0.85	0.56	0.71	0.98		0.84	0.04		0.62	0.20	0.78
Uniform Delay, d1	39.8	20.9	17.1	38.8	22.7		40.3	32.8		37.4	31.0	34.8
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	26.2	3.2	0.9	12.6	13.5		19.7	0.0		5.9	0.3	13.3
Delay (s)	66.0	24.1	18.0	51.4	36.2		60.0	32.8		43.3	31.3	48.1
Level of Service	E	C	B	D	D		E	C		D	C	D
Approach Delay (s)		24.3			36.9			54.1			44.9	
Approach LOS		C			D			D			D	

Intersection Summary				
HCM Average Control Delay	32.5	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.86			
Actuated Cycle Length (s)	88.6	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	76.4%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↱	↰	↑↑↑	↰↰	↱
Volume (vph)	1977	192	150	2184	88	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	5085	1583	1770	5085	3433	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	5085	1583	1770	5085	3433	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	2197	213	167	2427	98	76
RTOR Reduction (vph)	0	95	0	0	0	69
Lane Group Flow (vph)	2197	118	167	2427	98	7
Turn Type		Prot	Prot			Prot
Protected Phases	4	4	3	8	2	2
Permitted Phases						
Actuated Green, G (s)	32.2	32.2	8.1	44.3	5.7	5.7
Effective Green, g (s)	32.2	32.2	8.1	44.3	5.7	5.7
Actuated g/C Ratio	0.56	0.56	0.14	0.76	0.10	0.10
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2823	879	247	3884	337	156
v/s Ratio Prot	c0.43	0.07	0.09	c0.48	c0.03	0.00
v/s Ratio Perm						
v/c Ratio	0.78	0.13	0.68	0.62	0.29	0.05
Uniform Delay, d1	10.1	6.2	23.7	3.1	24.3	23.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.4	0.1	7.1	0.3	0.5	0.1
Delay (s)	11.5	6.3	30.8	3.4	24.8	23.8
Level of Service	B	A	C	A	C	C
Approach Delay (s)	11.0			5.2	24.3	
Approach LOS	B			A	C	

Intersection Summary				
HCM Average Control Delay	8.6	HCM Level of Service	A	
HCM Volume to Capacity ratio	0.71			
Actuated Cycle Length (s)	58.0	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	59.8%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↱	↰↰	↑↑↑	↰	↱
Volume (vph)	1885	160	160	2261	73	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	0.97	0.91	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	5085	1583	3433	5085	1770	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	5085	1583	3433	5085	1770	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	2094	178	178	2512	81	81
RTOR Reduction (vph)	0	77	0	0	0	71
Lane Group Flow (vph)	2094	101	178	2512	81	10
Turn Type		Prot	Prot			Prot
Protected Phases	4	4	3	8	2	2
Permitted Phases						
Actuated Green, G (s)	28.5	28.5	3.4	35.9	6.3	6.3
Effective Green, g (s)	28.5	28.5	3.4	35.9	6.3	6.3
Actuated g/C Ratio	0.57	0.57	0.07	0.72	0.13	0.13
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2887	899	233	3636	222	199
v/s Ratio Prot	0.41	0.06	0.05	c0.49	c0.05	0.01
v/s Ratio Perm						
v/c Ratio	0.73	0.11	0.76	0.69	0.36	0.05
Uniform Delay, d1	8.0	5.0	23.0	4.0	20.1	19.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.9	0.1	13.8	0.6	1.0	0.1
Delay (s)	8.9	5.1	36.8	4.6	21.1	19.4
Level of Service	A	A	D	A	C	B
Approach Delay (s)	8.6			6.7	20.3	
Approach LOS	A			A	C	

Intersection Summary				
HCM Average Control Delay	8.0	HCM Level of Service	A	
HCM Volume to Capacity ratio	0.64			
Actuated Cycle Length (s)	50.2	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	55.0%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	239	1015	516	270	1626	95	313	114	98	164	333	460
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.91		0.97	0.91		0.97	0.91	1.00	0.97	0.91	
Frt	1.00	0.95		1.00	0.99		1.00	1.00	0.85	1.00	0.91	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	4828		3433	5043		3433	5085	1583	3433	4643	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3433	4828		3433	5043		3433	5085	1583	3433	4643	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	266	1128	573	300	1807	106	348	127	109	182	370	511
RTOR Reduction (vph)	0	114	0	0	8	0	0	0	85	0	145	0
Lane Group Flow (vph)	266	1587	0	300	1905	0	348	127	24	182	736	0
Turn Type	Prot			Prot			Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Actuated Green, G (s)	7.4	29.5		8.3	30.4		9.4	17.4	17.4	8.2	16.2	
Effective Green, g (s)	7.4	29.5		8.3	30.4		9.4	17.4	17.4	8.2	16.2	
Actuated g/C Ratio	0.09	0.37		0.10	0.38		0.12	0.22	0.22	0.10	0.20	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	320	1794		359	1931		406	1114	347	355	947	
v/s Ratio Prot	0.08	0.33		c0.09	c0.38		c0.10	0.02		0.05	c0.16	
v/s Ratio Perm									0.02			
v/c Ratio	0.83	0.88		0.84	0.99		0.86	0.11	0.07	0.51	1.09dr	
Uniform Delay, d1	35.4	23.4		34.9	24.3		34.3	24.8	24.6	33.7	29.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	16.6	5.6		15.4	17.2		16.2	0.0	0.1	1.3	4.1	
Delay (s)	51.9	29.0		50.2	41.5		50.5	24.9	24.7	35.0	34.0	
Level of Service	D	C		D	D		D	C	C	C	C	
Approach Delay (s)		32.1			42.7			40.1			34.1	
Approach LOS		C			D			D			C	

Intersection Summary				
HCM Average Control Delay	37.3	HCM Level of Service	D	
HCM Volume to Capacity ratio	0.85			
Actuated Cycle Length (s)	79.4	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	79.4%	ICU Level of Service	D	
Analysis Period (min)	15			

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	162	673	324	280	1280	174	453	188	111	146	185	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	0.97	0.91		0.97	0.91		0.97	0.91		1.00	0.95	
Frt	1.00	0.95		1.00	0.98		1.00	0.94		1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	4837		3433	4994		3433	4803		1770	3293	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	4837		3433	4994		3433	4803		1770	3293	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	180	748	360	311	1422	193	503	209	123	162	206	178
RTOR Reduction (vph)	0	111	0	0	22	0	0	100	0	0	135	0
Lane Group Flow (vph)	180	997	0	311	1593	0	503	232	0	162	249	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	5.0	20.2		9.2	24.4		12.0	12.7		9.6	10.3	
Effective Green, g (s)	5.0	20.2		9.2	24.4		12.0	12.7		9.6	10.3	
Actuated g/C Ratio	0.07	0.30		0.14	0.36		0.18	0.19		0.14	0.15	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	254	1443		467	1800		609	901		251	501	
v/s Ratio Prot	0.05	0.21		c0.09	c0.32		c0.15	0.05		0.09	c0.08	
v/s Ratio Perm												
v/c Ratio	0.71	0.69		0.67	0.89		0.83	0.26		0.65	0.50	
Uniform Delay, d1	30.6	21.0		27.8	20.3		26.8	23.5		27.4	26.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	8.7	1.4		3.6	5.6		9.0	0.2		5.6	0.8	
Delay (s)	39.4	22.4		31.4	26.0		35.8	23.6		33.0	27.1	
Level of Service	D	C		C	C		D	C		C	C	
Approach Delay (s)		24.8			26.8			31.0			28.9	
Approach LOS		C			C			C			C	

Intersection Summary				
HCM Average Control Delay	27.3	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.73			
Actuated Cycle Length (s)	67.7	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	69.7%	ICU Level of Service	C	
Analysis Period (min)	15			

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	212	682	135	81	1119	216	122	156	11	56	62	129
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.99		1.00	0.90	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	4959		1770	4962		1770	1845		1770	1674	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	4959		1770	4962		1770	1845		1770	1674	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	236	758	150	90	1243	240	136	173	12	62	69	143
RTOR Reduction (vph)	0	33	0	0	34	0	0	3	0	0	102	0
Lane Group Flow (vph)	236	875	0	90	1449	0	136	182	0	62	110	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	12.5	30.5		7.0	25.0		7.9	16.2		4.0	12.3	
Effective Green, g (s)	12.5	30.5		7.0	25.0		7.9	16.2		4.0	12.3	
Actuated g/C Ratio	0.17	0.41		0.09	0.34		0.11	0.22		0.05	0.17	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	300	2052		168	1683		190	406		96	279	
v/s Ratio Prot	c0.13	0.18		0.05	c0.29		c0.08	c0.10		0.04	0.07	
v/s Ratio Perm												
v/c Ratio	0.79	0.43		0.54	0.86		0.72	0.45		0.65	0.40	
Uniform Delay, d1	29.3	15.4		31.8	22.7		31.8	24.9		34.2	27.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	12.7	0.1		3.3	4.8		12.1	0.8		14.0	0.9	
Delay (s)	42.1	15.5		35.1	27.5		43.9	25.7		48.1	28.3	
Level of Service	D	B		D	C		D	C		D	C	
Approach Delay (s)		21.0			27.9			33.4			32.8	
Approach LOS		C			C			C			C	

Intersection Summary				
HCM Average Control Delay	26.5	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.74			
Actuated Cycle Length (s)	73.7	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	69.5%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	169	586	35	67	1153	36	44	26	55	49	60	368
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	1.00		1.00	0.90		1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5042		1770	5062		1770	1673		1770	1623	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	5042		1770	5062		1770	1673		1770	1623	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	188	651	39	74	1281	40	49	29	61	54	67	409
RTOR Reduction (vph)	0	8	0	0	5	0	0	50	0	0	261	0
Lane Group Flow (vph)	188	682	0	74	1316	0	49	40	0	54	215	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	8.2	25.0		3.7	20.5		2.4	11.0		3.2	11.8	
Effective Green, g (s)	8.2	25.0		3.7	20.5		2.4	11.0		3.2	11.8	
Actuated g/C Ratio	0.14	0.42		0.06	0.35		0.04	0.19		0.05	0.20	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	246	2140		111	1762		72	312		96	325	
v/s Ratio Prot	c0.11	0.14		0.04	c0.26		0.03	0.02		c0.03	c0.13	
v/s Ratio Perm												
v/c Ratio	0.76	0.32		0.67	0.75		0.68	0.13		0.56	0.66	
Uniform Delay, d1	24.4	11.3		27.0	16.9		27.9	20.0		27.2	21.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	13.2	0.1		14.1	1.8		23.3	0.2		7.3	5.0	
Delay (s)	37.6	11.4		41.1	18.7		51.2	20.1		34.5	26.7	
Level of Service	D	B		D	B		D	C		C	C	
Approach Delay (s)		17.0			19.9			31.1			27.5	
Approach LOS		B			B			C			C	

Intersection Summary				
HCM Average Control Delay	20.9	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.66			
Actuated Cycle Length (s)	58.9	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	75.0%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	574	133	397	1028	277	342
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.91		1.00	0.91	0.97	1.00
Frt	0.97		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	4942		1770	5085	3433	1583
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	4942		1770	5085	3433	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	638	148	441	1142	308	380
RTOR Reduction (vph)	57	0	0	0	0	304
Lane Group Flow (vph)	729	0	441	1142	308	76
Turn Type			Prot			Prot
Protected Phases	4		3	8	2	2
Permitted Phases						
Actuated Green, G (s)	14.5		17.6	36.1	11.0	11.0
Effective Green, g (s)	14.5		17.6	36.1	11.0	11.0
Actuated g/C Ratio	0.26		0.32	0.66	0.20	0.20
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1301		565	3332	685	316
v/s Ratio Prot	c0.15		c0.25	0.22	c0.09	0.05
v/s Ratio Perm						
v/c Ratio	0.56		0.78	0.34	0.45	0.24
Uniform Delay, d1	17.5		17.0	4.2	19.4	18.5
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5		6.9	0.1	0.5	0.4
Delay (s)	18.1		23.9	4.3	19.9	18.9
Level of Service	B		C	A	B	B
Approach Delay (s)	18.1			9.8	19.3	
Approach LOS	B			A	B	

Intersection Summary			
HCM Average Control Delay	14.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	55.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	54.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	73	15	15	97	32	110	160	346	101	180	868	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.95	0.95			1.00	1.00	0.97	0.91		0.97	0.91	1.00
Frt	1.00	0.96			1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	0.98			0.96	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1657			1795	1583	3433	4913		3433	5085	1583
Flt Permitted	0.95	0.98			0.96	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1681	1657			1795	1583	3433	4913		3433	5085	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	81	17	17	108	36	122	178	384	112	200	964	71
RTOR Reduction (vph)	0	16	0	0	0	77	0	71	0	0	0	45
Lane Group Flow (vph)	58	41	0	0	144	45	178	425	0	200	964	26
Turn Type	Split			Split		custom	Prot			Prot		Perm
Protected Phases	2	2		6	6		3	8		7	4	
Permitted Phases						8						4
Actuated Green, G (s)	3.7	3.7			7.1	17.6	3.5	17.6		3.8	17.9	17.9
Effective Green, g (s)	3.7	3.7			7.1	17.6	3.5	17.6		3.8	17.9	17.9
Actuated g/C Ratio	0.08	0.08			0.15	0.37	0.07	0.37		0.08	0.37	0.37
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	129	127			264	578	249	1794		271	1888	588
v/s Ratio Prot	c0.03	0.02			c0.08		0.05	0.09		c0.06	c0.19	
v/s Ratio Perm						0.03						0.02
v/c Ratio	0.45	0.33			0.55	0.08	0.71	0.24		0.74	0.51	0.04
Uniform Delay, d1	21.3	21.1			19.1	10.0	21.9	10.6		21.7	11.8	9.7
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.5	1.5			2.3	0.1	9.4	0.1		10.0	0.2	0.0
Delay (s)	23.8	22.6			21.4	10.1	31.2	10.7		31.7	12.0	9.7
Level of Service	C	C			C	B	C	B		C	B	A
Approach Delay (s)		23.2			16.2			16.1			15.1	
Approach LOS		C			B			B			B	

Intersection Summary			
HCM Average Control Delay	15.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	48.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	45.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	176	85	116	46	195	153	114	460	7	103	485	177
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.93		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1740		1770	3531		1770	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	1863	1583	1770	1740		1770	3531		1770	3539	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	196	94	129	51	217	170	127	511	8	114	539	197
RTOR Reduction (vph)	0	0	79	0	36	0	0	2	0	0	0	152
Lane Group Flow (vph)	196	94	50	51	351	0	127	517	0	114	539	45
Turn Type	Prot		Prot	Prot			Prot			Prot		Prot
Protected Phases	7	4	4	3	8		5	2		1	6	6
Permitted Phases												
Actuated Green, G (s)	12.4	26.9	26.9	3.6	18.1		7.1	16.7		6.1	15.7	15.7
Effective Green, g (s)	12.4	26.9	26.9	3.6	18.1		7.1	16.7		6.1	15.7	15.7
Actuated g/C Ratio	0.18	0.39	0.39	0.05	0.26		0.10	0.24		0.09	0.23	0.23
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	317	723	614	92	454		181	851		156	802	359
v/s Ratio Prot	c0.11	0.05	0.03	0.03	c0.20		c0.07	0.15		0.06	c0.15	0.03
v/s Ratio Perm												
v/c Ratio	0.62	0.13	0.08	0.55	0.77		0.70	0.61		0.73	0.67	0.12
Uniform Delay, d1	26.3	13.7	13.4	32.1	23.7		30.1	23.4		30.8	24.5	21.3
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	3.6	0.1	0.1	7.1	8.0		11.6	1.2		16.1	2.2	0.2
Delay (s)	29.8	13.7	13.5	39.1	31.7		41.7	24.6		46.9	26.7	21.5
Level of Service	C	B	B	D	C		D	C		D	C	C
Approach Delay (s)		21.2			32.5			28.0			28.2	
Approach LOS		C			C			C			C	

Intersection Summary				
HCM Average Control Delay	27.7	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.70			
Actuated Cycle Length (s)	69.3	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	62.4%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	63	70	6	233	52	150	104	350	54	164	603	193
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.91		1.00	0.91	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1840		1770	1863	1583	1770	4983		1770	4901	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1840		1770	1863	1583	1770	4983		1770	4901	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	70	78	7	259	58	167	116	389	60	182	670	214
RTOR Reduction (vph)	0	5	0	0	0	124	0	29	0	0	75	0
Lane Group Flow (vph)	70	80	0	259	58	43	116	420	0	182	809	0
Turn Type	Prot			Prot		Prot	Prot			Prot		
Protected Phases	1	6		5	2	2	7	4		3	8	
Permitted Phases												
Actuated Green, G (s)	3.8	7.1		11.7	15.0	15.0	5.4	15.0		8.4	18.0	
Effective Green, g (s)	3.8	7.1		11.7	15.0	15.0	5.4	15.0		8.4	18.0	
Actuated g/C Ratio	0.07	0.12		0.20	0.26	0.26	0.09	0.26		0.14	0.31	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	116	224		356	480	408	164	1284		255	1516	
v/s Ratio Prot	0.04	c0.04		c0.15	0.03	0.03	0.07	0.08		c0.10	c0.17	
v/s Ratio Perm												
v/c Ratio	0.60	0.36		0.73	0.12	0.11	0.71	0.33		0.71	0.53	
Uniform Delay, d1	26.5	23.5		21.8	16.5	16.5	25.6	17.5		23.8	16.6	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	8.6	1.0		7.2	0.1	0.1	13.0	0.1		9.1	0.4	
Delay (s)	35.0	24.4		29.0	16.7	16.6	38.7	17.7		32.9	17.0	
Level of Service	D	C		C	B	B	D	B		C	B	
Approach Delay (s)		29.2			23.2			22.0			19.7	
Approach LOS		C			C			C			B	

Intersection Summary				
HCM Average Control Delay	21.7	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.61			
Actuated Cycle Length (s)	58.2	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	51.3%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	319	122	127	62	300	30	277	436	29	68	428	408
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85		0.99		1.00	0.99		1.00	0.93	
Flt Protected	0.95	1.00	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583		1829		1770	3506		1770	3280	
Flt Permitted	0.95	1.00	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1583		1829		1770	3506		1770	3280	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	336	128	134	65	316	32	292	459	31	72	451	429
RTOR Reduction (vph)	0	0	108	0	3	0	0	5	0	0	190	0
Lane Group Flow (vph)	336	128	26	0	410	0	292	485	0	72	690	0
Turn Type	Split		Prot	Split			Prot			Prot		
Protected Phases	4	4	4	8	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	17.6	17.6	17.6		20.0		15.4	30.0		7.0	21.6	
Effective Green, g (s)	17.6	17.6	17.6		20.0		15.4	30.0		7.0	21.6	
Actuated g/C Ratio	0.19	0.19	0.19		0.22		0.17	0.33		0.08	0.24	
Clearance Time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	344	362	308		404		301	1161		137	782	
v/s Ratio Prot	c0.19	0.07	0.02		c0.22		c0.17	0.14		0.04	c0.21	
v/s Ratio Perm												
v/c Ratio	0.98	0.35	0.08		1.01		0.97	0.42		0.53	0.88	
Uniform Delay, d1	36.3	31.6	29.9		35.3		37.4	23.5		40.2	33.3	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	41.9	0.6	0.1		48.5		43.6	0.2		3.6	11.5	
Delay (s)	78.1	32.2	30.0		83.8		80.9	23.8		43.8	44.8	
Level of Service	E	C	C		F		F	C		D	D	
Approach Delay (s)		57.5			83.8			45.1			44.7	
Approach LOS		E			F			D			D	

Intersection Summary				
HCM Average Control Delay	53.5	HCM Level of Service	D	
HCM Volume to Capacity ratio	0.96			
Actuated Cycle Length (s)	90.6	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	92.3%	ICU Level of Service	F	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBR	EBR2	NWL2	NWL	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	31	113	252	97	228	108	218	435	30	90	940	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.97		0.97	0.91		1.00	0.91	
Frt	1.00	0.85	0.85	1.00	0.95		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1583	1583	1770	3327		3433	5037		1770	5005	
Flt Permitted	0.95	1.00	1.00	0.95	0.97		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1583	1583	1770	3327		3433	5037		1770	5005	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	34	126	280	108	253	120	242	483	33	100	1044	122
RTOR Reduction (vph)	0	0	199	0	99	0	0	12	0	0	22	0
Lane Group Flow (vph)	34	126	81	108	274	0	242	504	0	100	1144	0
Turn Type		Perm	Perm	Split			Prot			Prot		
Protected Phases	2			6	6		3	8		7	4	
Permitted Phases		2	2									
Actuated Green, G (s)	9.6	9.6	9.6	5.8	5.8		5.0	18.7		3.5	17.2	
Effective Green, g (s)	9.6	9.6	9.6	5.8	5.8		5.0	18.7		3.5	17.2	
Actuated g/C Ratio	0.18	0.18	0.18	0.11	0.11		0.09	0.35		0.07	0.32	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	317	284	284	192	360		320	1757		116	1606	
v/s Ratio Prot	0.02			0.06	c0.08		c0.07	0.10		0.06	c0.23	
v/s Ratio Perm		c0.08	0.05									
v/c Ratio	0.11	0.44	0.29	0.56	0.76		0.76	0.29		0.86	0.71	
Uniform Delay, d1	18.4	19.6	19.0	22.7	23.2		23.7	12.6		24.8	16.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	1.1	0.6	3.7	9.2		9.8	0.1		44.0	1.5	
Delay (s)	18.6	20.7	19.6	26.4	32.4		33.5	12.7		68.8	17.5	
Level of Service	B	C	B	C	C		C	B		E	B	
Approach Delay (s)	19.8				31.1			19.3			21.6	
Approach LOS	B				C			B			C	

Intersection Summary				
HCM Average Control Delay	22.3	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.66			
Actuated Cycle Length (s)	53.6	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	53.4%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	55	6	77	13	27	14	129	31	2	3	16	201
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	61	7	86	14	30	16	143	34	2	3	18	223

Direction, Lane #	SE 1	SE 2	NW 1	NE 1	SW 1
Volume Total (vph)	68	86	60	180	244
Volume Left (vph)	61	0	14	143	3
Volume Right (vph)	0	86	16	2	223
Hadj (s)	0.48	-0.67	-0.07	0.19	-0.51
Departure Headway (s)	6.0	4.9	5.1	4.9	4.2
Degree Utilization, x	0.11	0.12	0.09	0.25	0.28
Capacity (veh/h)	553	679	629	696	813
Control Delay (s)	8.6	7.3	8.6	9.5	8.8
Approach Delay (s)	7.9		8.6	9.5	8.8
Approach LOS	A		A	A	A

Intersection Summary			
Delay	8.8		
HCM Level of Service	A		
Intersection Capacity Utilization	42.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	54	92	119	205	63	25	31	304	83	15	794	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85		0.99		1.00	0.97		1.00	0.98	
Flt Protected		0.98	1.00		0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1829	1583		1779		1770	3426		1770	3458	
Flt Permitted		0.98	1.00		0.97		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1829	1583		1779		1770	3426		1770	3458	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	60	102	132	228	70	28	34	338	92	17	882	160
RTOR Reduction (vph)	0	0	110	0	4	0	0	29	0	0	17	0
Lane Group Flow (vph)	0	162	22	0	322	0	34	401	0	17	1025	0
Turn Type	Split		Prot	Split			Prot			Prot		
Protected Phases	4	4	4	8	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)		11.5	11.5		15.9		1.6	26.3		0.8	25.5	
Effective Green, g (s)		11.5	11.5		15.9		1.6	26.3		0.8	25.5	
Actuated g/C Ratio		0.16	0.16		0.23		0.02	0.37		0.01	0.36	
Clearance Time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		298	258		401		40	1278		20	1251	
v/s Ratio Prot		c0.09	0.01		c0.18		c0.02	0.12		0.01	c0.30	
v/s Ratio Perm												
v/c Ratio		0.54	0.08		0.80		0.85	0.31		0.85	0.82	
Uniform Delay, d1		27.1	25.0		25.8		34.3	15.7		34.8	20.4	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		2.0	0.1		11.1		85.5	0.1		131.5	4.3	
Delay (s)		29.1	25.2		36.9		119.8	15.8		166.3	24.7	
Level of Service		C	C		D		F	B		F	C	
Approach Delay (s)		27.3			36.9			23.5			27.0	
Approach LOS		C			D			C			C	

Intersection Summary					
HCM Average Control Delay	27.8	HCM Level of Service		C	
HCM Volume to Capacity ratio	0.76				
Actuated Cycle Length (s)	70.5	Sum of lost time (s)		16.0	
Intersection Capacity Utilization	60.1%	ICU Level of Service		B	
Analysis Period (min)	15				
c Critical Lane Group					

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	327	181	405	648	0	0	0	0	1081	3	148
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		0.97	0.95					0.95	0.91	0.95
Frt		0.95		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.95	1.00
Satd. Flow (prot)		3350		3433	3539					1681	1610	1504
Flt Permitted		1.00		0.95	1.00					0.95	0.95	1.00
Satd. Flow (perm)		3350		3433	3539					1681	1610	1504
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	363	201	450	720	0	0	0	0	1201	3	164
RTOR Reduction (vph)	0	112	0	0	0	0	0	0	0	0	1	72
Lane Group Flow (vph)	0	452	0	450	720	0	0	0	0	613	606	76
Turn Type				Prot						Prot		Prot
Protected Phases		4		3	8					1	6	6
Permitted Phases												
Actuated Green, G (s)		14.0		10.9	28.9					30.6	30.6	30.6
Effective Green, g (s)		14.0		10.9	28.9					30.6	30.6	30.6
Actuated g/C Ratio		0.21		0.16	0.43					0.45	0.45	0.45
Clearance Time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		695		554	1515					762	730	682
v/s Ratio Prot		c0.13		c0.13	0.20					0.36	c0.38	0.05
v/s Ratio Perm												
v/c Ratio		0.65		0.81	0.48					0.80	0.83	0.11
Uniform Delay, d1		24.5		27.3	13.9					15.9	16.2	10.6
Progression Factor		1.00		1.00	1.00					1.00	1.00	1.00
Incremental Delay, d2		2.2		8.9	0.2					6.2	7.9	0.1
Delay (s)		26.7		36.2	14.1					22.1	24.1	10.7
Level of Service		C		D	B					C	C	B
Approach Delay (s)		26.7			22.6			0.0			21.7	
Approach LOS		C			C			A			C	

Intersection Summary				
HCM Average Control Delay	23.0	HCM Level of Service		C
HCM Volume to Capacity ratio	0.78			
Actuated Cycle Length (s)	67.5	Sum of lost time (s)		12.0
Intersection Capacity Utilization	115.1%	ICU Level of Service		H
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	63	1273	0	0	981	879	109	2	570	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	0.97	0.95			0.95	1.00	0.95	0.91	0.95			
Frt	1.00	1.00			1.00	0.85	1.00	0.86	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (prot)	3433	3539			3539	1583	1681	1449	1504			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (perm)	3433	3539			3539	1583	1681	1449	1504			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	70	1414	0	0	1090	977	121	2	633	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	494	0	31	31	0	0	0
Lane Group Flow (vph)	70	1414	0	0	1090	483	109	293	292	0	0	0
Turn Type	Prot					Prot	Prot		Prot			
Protected Phases	7	4			8	8	5	2	2			
Permitted Phases												
Actuated Green, G (s)	2.5	33.3			26.8	26.8	16.6	16.6	16.6			
Effective Green, g (s)	2.5	33.3			26.8	26.8	16.6	16.6	16.6			
Actuated g/C Ratio	0.04	0.58			0.46	0.46	0.29	0.29	0.29			
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0			
Lane Grp Cap (vph)	148	2035			1638	733	482	415	431			
v/s Ratio Prot	0.02	c0.40			0.31	0.31	0.06	c0.20	0.19			
v/s Ratio Perm												
v/c Ratio	0.47	0.69			0.67	0.66	0.23	0.71	0.68			
Uniform Delay, d1	27.1	8.7			12.1	12.0	15.8	18.5	18.3			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	2.4	1.0			1.0	2.2	0.2	5.4	4.2			
Delay (s)	29.4	9.8			13.1	14.2	16.0	23.8	22.5			
Level of Service	C	A			B	B	B	C	C			
Approach Delay (s)		10.7			13.6			22.1			0.0	
Approach LOS		B			B			C			A	

Intersection Summary				
HCM Average Control Delay	14.1	HCM Level of Service		B
HCM Volume to Capacity ratio	0.70			
Actuated Cycle Length (s)	57.9	Sum of lost time (s)		8.0
Intersection Capacity Utilization	115.1%	ICU Level of Service		H
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	36	13	44	725	19	169	90	1043	149	129	1129	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.95	0.91	0.95	0.95	0.91	0.95	1.00	0.91		1.00	0.91	
Frt	1.00	0.93	0.85	1.00	0.99	0.85	1.00	0.98		1.00	1.00	
Flt Protected	0.95	0.99	1.00	0.95	0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1681	1563	1504	1681	1611	1504	1770	4990		1770	5067	
Flt Permitted	0.95	0.99	1.00	0.95	0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1681	1563	1504	1681	1611	1504	1770	4990		1770	5067	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	40	14	49	806	21	188	100	1159	166	143	1254	31
RTOR Reduction (vph)	0	16	30	0	1	119	0	16	0	0	2	0
Lane Group Flow (vph)	36	19	2	427	418	50	100	1309	0	143	1283	0
Turn Type	Split		Prot	Split		Prot	Prot			Prot		
Protected Phases	4	4	4	8	8	8	5	2		1		
Permitted Phases											6	
Actuated Green, G (s)	6.1	6.1	6.1	27.5	27.5	27.5	7.0	30.5		12.4	35.9	
Effective Green, g (s)	6.1	6.1	6.1	27.5	27.5	27.5	7.0	30.5		12.4	35.9	
Actuated g/C Ratio	0.07	0.07	0.07	0.30	0.30	0.30	0.08	0.33		0.13	0.39	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	111	103	99	500	479	447	134	1645		237	1967	
v/s Ratio Prot	c0.02	0.01	0.00	0.25	c0.26	0.03	c0.06	c0.26		c0.08		
v/s Ratio Perm											0.25	
v/c Ratio	0.32	0.19	0.02	0.85	0.87	0.11	0.75	0.80		0.60	0.65	
Uniform Delay, d1	41.2	40.9	40.4	30.6	30.8	23.6	41.9	28.2		37.7	23.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.7	0.9	0.1	13.3	15.9	0.1	20.0	2.8		4.3	0.8	
Delay (s)	42.9	41.7	40.5	43.9	46.7	23.7	61.9	30.9		42.0	24.0	
Level of Service	D	D	D	D	D	C	E	C		D	C	
Approach Delay (s)		41.8			41.7			33.1			25.8	
Approach LOS		D			D			C			C	

Intersection Summary				
HCM Average Control Delay	32.9	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.76			
Actuated Cycle Length (s)	92.5	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	69.6%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	349	1043	261	165	924	0	0	634	681
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0	4.0	4.0	4.0	4.0			4.0	4.0
Lane Util. Factor				0.97	0.91	1.00	0.97	0.95			0.86	0.86
Frpb, ped/bikes				1.00	1.00	1.00	1.00	1.00			0.93	1.00
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00			1.00	1.00
Frt				1.00	1.00	0.85	1.00	1.00			0.95	0.85
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				3433	5085	1583	3433	3539			4252	1362
Flt Permitted				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)				3433	5085	1583	3433	3539			4252	1362
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	388	1159	290	183	1027	0	0	704	757
RTOR Reduction (vph)	0	0	0	0	0	53	0	0	0	0	10	10
Lane Group Flow (vph)	0	0	0	388	1159	237	183	1027	0	0	1073	368
Confl. Peds. (#/hr)												200
Turn Type				Split		Prot	Prot					Prot
Protected Phases				8	8	8	5	2			6	6
Permitted Phases												
Actuated Green, G (s)				16.0	16.0	16.0	3.0	24.2			17.2	17.2
Effective Green, g (s)				16.0	16.0	16.0	3.0	24.2			17.2	17.2
Actuated g/C Ratio				0.33	0.33	0.33	0.06	0.50			0.36	0.36
Clearance Time (s)				4.0	4.0	4.0	4.0	4.0			4.0	4.0
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)				1140	1688	525	214	1777			1517	486
v/s Ratio Prot				0.11	c0.23	0.15	0.05	c0.29			0.25	c0.27
v/s Ratio Perm												
v/c Ratio				0.34	0.69	0.45	0.86	0.58			0.71	0.76
Uniform Delay, d1				12.1	13.9	12.7	22.4	8.4			13.3	13.7
Progression Factor				1.00	1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2				0.2	1.2	0.6	26.8	0.5			1.5	6.6
Delay (s)				12.3	15.1	13.3	49.1	8.9			14.9	20.3
Level of Service				B	B	B	D	A			B	C
Approach Delay (s)		0.0			14.2			15.0			16.3	
Approach LOS		A			B			B			B	

Intersection Summary				
HCM Average Control Delay	15.1	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.73			
Actuated Cycle Length (s)	48.2	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	102.2%	ICU Level of Service	G	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	651	943	317	0	0	0	0	412	227	154	755	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Lane Util. Factor	0.91	0.86	0.91					0.86		1.00	0.91	
Frt	1.00	1.00	0.85					0.95		1.00	1.00	
Flt Protected	0.95	0.99	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	1610	3172	1441					6067		1770	5085	
Flt Permitted	0.95	0.99	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	1610	3172	1441					6067		1770	5085	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	723	1048	352	0	0	0	0	458	252	171	839	0
RTOR Reduction (vph)	0	3	54	0	0	0	0	53	0	0	0	0
Lane Group Flow (vph)	586	1217	263	0	0	0	0	657	0	171	839	0
Turn Type	Split		Prot							Prot		
Protected Phases	4	4	4					2		1	6	
Permitted Phases												
Actuated Green, G (s)	27.1	27.1	27.1					13.3		8.0	25.3	
Effective Green, g (s)	27.1	27.1	27.1					13.3		8.0	25.3	
Actuated g/C Ratio	0.45	0.45	0.45					0.22		0.13	0.42	
Clearance Time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	722	1423	647					1336		234	2130	
v/s Ratio Prot	0.36	c0.38	0.18					c0.11		c0.10	0.16	
v/s Ratio Perm												
v/c Ratio	0.81	0.86	0.41					0.49		0.73	0.39	
Uniform Delay, d1	14.4	14.9	11.2					20.6		25.2	12.2	
Progression Factor	1.00	1.00	1.00					1.00		1.00	1.00	
Incremental Delay, d2	6.9	5.3	0.4					0.3		11.1	0.1	
Delay (s)	21.3	20.2	11.6					20.9		36.3	12.3	
Level of Service	C	C	B					C		D	B	
Approach Delay (s)		19.2			0.0			20.9			16.4	
Approach LOS		B			A			C			B	

Intersection Summary				
HCM Average Control Delay	18.8	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.73			
Actuated Cycle Length (s)	60.4	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	102.2%	ICU Level of Service	G	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Volume (vph)	16	218	0	442	25	97	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		0.95		1.00	1.00
Frt	1.00	1.00		0.99		1.00	0.85
Flt Protected	0.95	1.00		1.00		0.95	1.00
Satd. Flow (prot)	1770	3539		3511		1770	1583
Flt Permitted	0.95	1.00		1.00		0.95	1.00
Satd. Flow (perm)	1770	3539		3511		1770	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	18	242	0	491	28	108	128
RTOR Reduction (vph)	0	0	0	8	0	0	100
Lane Group Flow (vph)	18	242	0	511	0	108	28
Turn Type	Prot		Prot				Prot
Protected Phases	7	4	3	8		6	6
Permitted Phases							
Actuated Green, G (s)	0.5	12.1		7.6		5.6	5.6
Effective Green, g (s)	0.5	12.1		7.6		5.6	5.6
Actuated g/C Ratio	0.02	0.47		0.30		0.22	0.22
Clearance Time (s)	4.0	4.0		4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0		3.0	3.0
Lane Grp Cap (vph)	34	1666		1038		386	345
v/s Ratio Prot	0.01	c0.07		c0.15		c0.06	0.02
v/s Ratio Perm							
v/c Ratio	0.53	0.15		0.49		0.28	0.08
Uniform Delay, d1	12.5	3.9		7.5		8.4	8.0
Progression Factor	1.00	1.00		1.00		1.00	1.00
Incremental Delay, d2	14.1	0.0		0.4		0.4	0.1
Delay (s)	26.6	3.9		7.8		8.8	8.1
Level of Service	C	A		A		A	A
Approach Delay (s)		5.5		7.8		8.4	
Approach LOS		A		A		A	

Intersection Summary			
HCM Average Control Delay	7.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	25.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	26.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	EBR2	WBL	WBT	WBR	NBL	NBT	NBR2	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	78	220	179	275	373	100	342	349	287	1102	231	209
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.88	1.00	1.00	1.00		1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.85	0.85	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	2787	1583	1770	1804		1770	3539	1583	3433	3539	1583
Flt Permitted	0.46	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	864	2787	1583	1770	1804		1770	3539	1583	3433	3539	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	87	244	199	306	414	111	380	388	319	1224	257	232
RTOR Reduction (vph)	0	0	170	0	10	0	0	0	269	0	0	175
Lane Group Flow (vph)	87	244	29	306	515	0	380	388	50	1224	257	57
Turn Type	custom	custom	custom	Prot			Prot		Perm	Prot		Perm
Protected Phases				3	8		5	2		1	6	
Permitted Phases	4	4	4						2			6
Actuated Green, G (s)	14.1	14.1	14.1	17.0	35.1		25.5	15.0	15.0	34.1	23.6	23.6
Effective Green, g (s)	14.1	14.1	14.1	17.0	35.1		25.5	15.0	15.0	34.1	23.6	23.6
Actuated g/C Ratio	0.15	0.15	0.15	0.18	0.36		0.27	0.16	0.16	0.35	0.25	0.25
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	127	408	232	313	658		469	552	247	1217	868	388
v/s Ratio Prot				c0.17	c0.29		0.21	c0.11		c0.36	0.07	
v/s Ratio Perm	0.10	0.09	0.02						0.03			0.04
v/c Ratio	0.69	0.60	0.13	0.98	0.78		0.81	0.70	0.20	1.01	0.30	0.15
Uniform Delay, d1	38.9	38.4	35.7	39.4	27.2		33.1	38.5	35.4	31.0	29.5	28.4
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	14.2	2.4	0.2	44.3	6.1		10.2	4.0	0.4	27.2	0.2	0.2
Delay (s)	53.2	40.8	35.9	83.7	33.2		43.3	42.5	35.8	58.2	29.7	28.6
Level of Service	D	D	D	F	C		D	D	D	E	C	C
Approach Delay (s)					51.8			40.8			50.0	
Approach LOS					D			D			D	

Intersection Summary				
HCM Average Control Delay	46.8	HCM Level of Service	D	
HCM Volume to Capacity ratio	0.88			
Actuated Cycle Length (s)	96.2	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	84.5%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	450	0	330	0	0	0	0	533	129	188	466	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95	1.00					0.95		0.97	0.95	
Frt	1.00	1.00	0.85					0.97		1.00	1.00	
Flt Protected	0.95	0.95	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	1681	1681	1583					3436		3433	3539	
Flt Permitted	0.95	0.95	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	1681	1681	1583					3436		3433	3539	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	500	0	367	0	0	0	0	592	143	209	518	0
RTOR Reduction (vph)	0	0	202	0	0	0	0	42	0	0	0	0
Lane Group Flow (vph)	250	250	165	0	0	0	0	693	0	209	518	0
Turn Type	Split		Prot							Prot		
Protected Phases	4	4	4					2		1	6	
Permitted Phases												
Actuated Green, G (s)	13.1	13.1	13.1					14.2		3.6	21.8	
Effective Green, g (s)	13.1	13.1	13.1					14.2		3.6	21.8	
Actuated g/C Ratio	0.31	0.31	0.31					0.33		0.08	0.51	
Clearance Time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	513	513	483					1137		288	1798	
v/s Ratio Prot	c0.15	0.15	0.10					c0.20		c0.06	0.15	
v/s Ratio Perm												
v/c Ratio	0.49	0.49	0.34					0.61		0.73	0.29	
Uniform Delay, d1	12.2	12.2	11.6					12.0		19.2	6.1	
Progression Factor	1.00	1.00	1.00					1.00		1.00	1.00	
Incremental Delay, d2	0.7	0.7	0.4					0.9		8.8	0.1	
Delay (s)	12.9	12.9	12.0					13.0		27.9	6.2	
Level of Service	B	B	B					B		C	A	
Approach Delay (s)		12.5			0.0			13.0			12.4	
Approach LOS		B			A			B			B	

Intersection Summary				
HCM Average Control Delay	12.6	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.57			
Actuated Cycle Length (s)	42.9	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	46.7%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	89	521	39	145	478	345	60	66	243	642	143	183
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		4.0	5.0		4.0	5.0		4.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		0.97	1.00	
Frt	1.00	0.99		1.00	0.94		1.00	0.88		1.00	0.92	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3503		1770	3317		1770	1643		3433	1706	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3503		1770	3317		1770	1643		3433	1706	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	99	579	43	161	531	383	67	73	270	713	159	203
RTOR Reduction (vph)	0	7	0	0	162	0	0	139	0	0	57	0
Lane Group Flow (vph)	99	615	0	161	752	0	67	204	0	713	305	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												
Actuated Green, G (s)	5.0	18.0		9.0	21.0		5.4	13.7		17.6	25.9	
Effective Green, g (s)	5.0	18.0		9.0	21.0		5.4	13.7		17.6	25.9	
Actuated g/C Ratio	0.07	0.24		0.12	0.28		0.07	0.18		0.23	0.34	
Clearance Time (s)	5.0	5.0		4.0	5.0		4.0	5.0		4.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	116	826		209	913		125	295		792	579	
v/s Ratio Prot	0.06	0.18		c0.09	c0.23		0.04	c0.12		c0.21	0.18	
v/s Ratio Perm												
v/c Ratio	0.85	0.74		0.77	0.82		0.54	0.69		0.90	0.53	
Uniform Delay, d1	35.3	27.0		32.6	25.9		34.2	29.3		28.5	20.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	42.0	3.7		16.0	6.1		4.4	6.9		13.3	0.9	
Delay (s)	77.3	30.7		48.6	32.0		38.6	36.2		41.8	21.1	
Level of Service	E	C		D	C		D	D		D	C	
Approach Delay (s)		37.1			34.5			36.6			34.8	
Approach LOS		D			C			D			C	

Intersection Summary				
HCM Average Control Delay	35.4	HCM Level of Service	D	
HCM Volume to Capacity ratio	0.83			
Actuated Cycle Length (s)	76.3	Sum of lost time (s)	18.0	
Intersection Capacity Utilization	81.8%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	WBL	WBR	SEL	SET	NWT	NWR	NWR2	SWL	SWR
Lane Configurations									
Volume (vph)	0	0	777	597	764	0	315	137	236
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor			0.97	0.95	0.95		1.00	0.97	1.00
Frt			1.00	1.00	1.00		0.85	1.00	0.85
Flt Protected			0.95	1.00	1.00		1.00	0.95	1.00
Satd. Flow (prot)			3433	3539	3539		1583	3433	1583
Flt Permitted			0.95	1.00	1.00		1.00	0.95	1.00
Satd. Flow (perm)			3433	3539	3539		1583	3433	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	863	663	849	0	350	152	262
RTOR Reduction (vph)	0	0	0	0	0	0	237	0	223
Lane Group Flow (vph)	0	0	863	663	849	0	113	152	39
Turn Type			Prot				Perm		Perm
Protected Phases			5	2	6			4	
Permitted Phases							6		4
Actuated Green, G (s)			17.4	39.3	17.9		17.9	8.2	8.2
Effective Green, g (s)			17.4	39.3	17.9		17.9	8.2	8.2
Actuated g/C Ratio			0.31	0.71	0.32		0.32	0.15	0.15
Clearance Time (s)			4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)			3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)			1076	2506	1141		511	507	234
v/s Ratio Prot			c0.25	0.19	c0.24			c0.04	
v/s Ratio Perm							0.07		0.02
v/c Ratio			0.80	0.26	0.74		0.22	0.30	0.17
Uniform Delay, d1			17.5	2.9	16.8		13.7	21.1	20.7
Progression Factor			1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2			4.4	0.1	2.7		0.2	0.3	0.3
Delay (s)			21.9	3.0	19.4		13.9	21.4	21.0
Level of Service			C	A	B		B	C	C
Approach Delay (s)	0.0			13.7	17.8			21.2	
Approach LOS	A			B	B			C	

Intersection Summary				
HCM Average Control Delay	16.2	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.68			
Actuated Cycle Length (s)	55.5	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	57.2%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	357	381	0	0	745	220	309	0	166	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	0.97	0.95			0.95	1.00	0.95	0.95	1.00			
Frt	1.00	1.00			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (prot)	3433	3539			3539	1583	1681	1681	1583			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (perm)	3433	3539			3539	1583	1681	1681	1583			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	397	423	0	0	828	244	343	0	184	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	158	0	0	144	0	0	0
Lane Group Flow (vph)	397	423	0	0	828	86	171	172	40	0	0	0
Turn Type	Prot					Prot	Split		Prot			
Protected Phases	1	6			2	2	4	4	4			
Permitted Phases												
Actuated Green, G (s)	10.1	32.2			18.1	18.1	11.3	11.3	11.3			
Effective Green, g (s)	10.1	32.2			18.1	18.1	11.3	11.3	11.3			
Actuated g/C Ratio	0.20	0.63			0.35	0.35	0.22	0.22	0.22			
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0			
Lane Grp Cap (vph)	673	2213			1244	556	369	369	347			
v/s Ratio Prot	c0.12	0.12			c0.23	0.05	0.10	c0.10	0.03			
v/s Ratio Perm												
v/c Ratio	0.59	0.19			0.67	0.15	0.46	0.47	0.12			
Uniform Delay, d1	18.8	4.1			14.1	11.5	17.5	17.5	16.1			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	1.3	0.0			1.4	0.1	0.9	0.9	0.2			
Delay (s)	20.1	4.1			15.5	11.6	18.4	18.4	16.3			
Level of Service	C	A			B	B	B	B	B			
Approach Delay (s)		11.9			14.6			17.6			0.0	
Approach LOS		B			B			B			A	

Intersection Summary				
HCM Average Control Delay	14.3	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.59			
Actuated Cycle Length (s)	51.5	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	49.3%	ICU Level of Service	A	
Analysis Period (min)	15			

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	10	10	10	206	2	26	3	276	103	15	967	3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	11	11	11	229	2	29	3	307	114	17	1074	3

Direction, Lane #	EB 1	WB 1	NE 1	NE 2	SW 1	SW 2
Volume Total (vph)	33	260	157	268	554	541
Volume Left (vph)	11	229	3	0	17	0
Volume Right (vph)	11	29	0	114	0	3
Hadj (s)	-0.10	0.14	0.04	-0.27	0.05	0.03
Departure Headway (s)	7.5	6.8	7.2	6.8	6.3	6.3
Degree Utilization, x	0.07	0.49	0.31	0.51	0.98	0.95
Capacity (veh/h)	443	511	494	518	558	562
Control Delay (s)	11.1	16.3	12.2	15.5	56.0	50.2
Approach Delay (s)	11.1	16.3	14.3		53.1	
Approach LOS	B	C	B		F	

Intersection Summary				
Delay	38.0			
HCM Level of Service	E			
Intersection Capacity Utilization	63.9%	ICU Level of Service	B	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	6	478	547	185	425	3	574	2	438	0	2	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.95	1.00		1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1861			1774	1583		1779	
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.95	1.00		1.00	
Satd. Flow (perm)	1770	1863	1583	1770	1861			1774	1583		1779	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	6	503	576	195	447	3	604	2	461	0	2	1
RTOR Reduction (vph)	0	0	219	0	0	0	0	0	283	0	1	0
Lane Group Flow (vph)	6	503	357	195	450	0	0	606	178	0	2	0
Turn Type	Prot		Perm	Prot			Split		Perm	Split		
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4						2			
Actuated Green, G (s)	0.8	35.4	35.4	13.2	47.8			40.8	40.8		1.1	
Effective Green, g (s)	0.8	35.4	35.4	13.2	47.8			40.8	40.8		1.1	
Actuated g/C Ratio	0.01	0.33	0.33	0.12	0.45			0.38	0.38		0.01	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	13	619	526	219	835			680	606		18	
v/s Ratio Prot	0.00	c0.27		c0.11	0.24			c0.34			c0.00	
v/s Ratio Perm			0.23						0.11			
v/c Ratio	0.46	0.81	0.68	0.89	0.54			0.89	0.29		0.11	
Uniform Delay, d1	52.6	32.5	30.6	45.9	21.3			30.8	22.8		52.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	23.8	8.0	3.5	33.0	0.7			13.9	0.3		2.7	
Delay (s)	76.4	40.5	34.1	78.9	22.0			44.7	23.1		55.0	
Level of Service	E	D	C	E	C			D	C		D	
Approach Delay (s)		37.3			39.2			35.4			55.0	
Approach LOS		D			D			D			D	

Intersection Summary				
HCM Average Control Delay	37.0	HCM Level of Service	D	
HCM Volume to Capacity ratio	0.85			
Actuated Cycle Length (s)	106.5	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	84.0%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Volume (vph)	220	264	0	589	382	342	318
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00		1.00	1.00	1.00	0.95
Frt	1.00	0.85		1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00		1.00	1.00	0.95	1.00
Satd. Flow (prot)	3433	1583		1863	1583	1770	3539
Flt Permitted	0.95	1.00		1.00	1.00	0.95	1.00
Satd. Flow (perm)	3433	1583		1863	1583	1770	3539
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	244	293	0	654	424	380	353
RTOR Reduction (vph)	0	242	0	0	253	0	0
Lane Group Flow (vph)	244	51	0	654	171	380	353
Turn Type		Perm	Prot		Perm	Prot	
Protected Phases	1		3	8		7	
Permitted Phases		1			8		6
Actuated Green, G (s)	12.6	12.6		29.3	29.3	18.7	12.6
Effective Green, g (s)	12.6	12.6		29.3	29.3	18.7	12.6
Actuated g/C Ratio	0.17	0.17		0.40	0.40	0.26	0.17
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	596	275		752	639	456	614
v/s Ratio Prot	0.07			c0.35		c0.21	
v/s Ratio Perm		0.03			0.11		c0.10
v/c Ratio	0.41	0.18		0.87	0.27	0.83	0.57
Uniform Delay, d1	26.7	25.6		19.9	14.5	25.5	27.5
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5	0.3		10.5	0.2	12.3	1.3
Delay (s)	27.1	25.9		30.4	14.7	37.8	28.8
Level of Service	C	C		C	B	D	C
Approach Delay (s)	26.5			24.2			33.5
Approach LOS	C			C			C

Intersection Summary				
HCM Average Control Delay	27.6	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.80			
Actuated Cycle Length (s)	72.6	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	66.2%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Volume (vph)	65	6	0	930	111	8	534
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0		4.0	4.0
Lane Util. Factor	0.97			0.95		1.00	0.95
Frt	0.99			0.98		1.00	1.00
Flt Protected	0.96			1.00		0.95	1.00
Satd. Flow (prot)	3410			3483		1770	3539
Flt Permitted	0.96			1.00		0.95	1.00
Satd. Flow (perm)	3410			3483		1770	3539
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	72	7	0	1033	123	9	593
RTOR Reduction (vph)	6	0	0	12	0	0	0
Lane Group Flow (vph)	73	0	0	1144	0	9	593
Turn Type			Prot			Prot	
Protected Phases	8		5	2		1	6
Permitted Phases							
Actuated Green, G (s)	3.2			20.0		0.6	24.6
Effective Green, g (s)	3.2			20.0		0.6	24.6
Actuated g/C Ratio	0.09			0.56		0.02	0.69
Clearance Time (s)	4.0			4.0		4.0	4.0
Vehicle Extension (s)	3.0			3.0		3.0	3.0
Lane Grp Cap (vph)	305			1946		30	2432
v/s Ratio Prot	c0.02			c0.33		0.01	c0.17
v/s Ratio Perm							
v/c Ratio	0.24			0.59		0.30	0.24
Uniform Delay, d1	15.2			5.2		17.4	2.1
Progression Factor	1.00			1.00		1.00	1.00
Incremental Delay, d2	0.4			0.5		5.6	0.1
Delay (s)	15.6			5.6		23.0	2.2
Level of Service	B			A		C	A
Approach Delay (s)	15.6			5.6			2.5
Approach LOS	B			A			A

Intersection Summary			
HCM Average Control Delay	5.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	35.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	39.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	22	14	27	21	155	26	846	66	89	478	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.94		1.00	0.87		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1751		1770	1616		1770	3501		1770	3510	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1751		1770	1616		1770	3501		1770	3510	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	26	24	16	30	23	172	29	940	73	99	531	31
RTOR Reduction (vph)	0	14	0	0	149	0	0	7	0	0	5	0
Lane Group Flow (vph)	26	26	0	30	46	0	29	1006	0	99	557	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	0.9	5.7		1.9	6.7		1.6	22.5		4.3	25.2	
Effective Green, g (s)	0.9	5.7		1.9	6.7		1.6	22.5		4.3	25.2	
Actuated g/C Ratio	0.02	0.11		0.04	0.13		0.03	0.45		0.09	0.50	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	32	198		67	215		56	1563		151	1755	
v/s Ratio Prot	0.01	0.01		c0.02	c0.03		0.02	c0.29		c0.06	c0.16	
v/s Ratio Perm												
v/c Ratio	0.81	0.13		0.45	0.21		0.52	0.64		0.66	0.32	
Uniform Delay, d1	24.7	20.1		23.7	19.5		24.0	10.8		22.3	7.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	84.7	0.3		4.7	0.5		7.9	0.9		9.8	0.1	
Delay (s)	109.3	20.4		28.4	20.0		31.9	11.8		32.2	7.6	
Level of Service	F	C		C	B		C	B		C	A	
Approach Delay (s)		55.4			21.1			12.3			11.3	
Approach LOS		E			C			B			B	

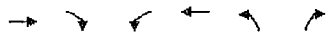
Intersection Summary			
HCM Average Control Delay	14.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	50.4	Sum of lost time (s)	16.0
Intersection Capacity Utilization	57.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	7	42	33	54	30	20	48	1000	134	23	513	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.94		1.00	0.98		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1751		1770	3476		1770	3529	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1583	1770	1751		1770	3476		1770	3529	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	8	47	37	60	33	22	53	1111	149	26	570	11
RTOR Reduction (vph)	0	0	33	0	19	0	0	12	0	0	2	0
Lane Group Flow (vph)	8	47	4	60	36	0	53	1248	0	26	579	0
Turn Type	Prot		Perm	Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	0.8	4.9	4.9	2.9	7.0		1.9	25.4		0.7	24.2	
Effective Green, g (s)	0.8	4.9	4.9	2.9	7.0		1.9	25.4		0.7	24.2	
Actuated g/C Ratio	0.02	0.10	0.10	0.06	0.14		0.04	0.51		0.01	0.48	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	28	183	155	103	246		67	1769		25	1711	
v/s Ratio Prot	0.00	c0.03		c0.03	0.02		c0.03	c0.36		0.01	0.16	
v/s Ratio Perm			0.00									
v/c Ratio	0.29	0.26	0.02	0.58	0.15		0.79	0.71		1.04	0.34	
Uniform Delay, d1	24.3	20.8	20.3	22.9	18.8		23.8	9.4		24.6	7.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	5.6	0.7	0.1	8.1	0.3		45.6	1.3		192.8	0.1	
Delay (s)	29.8	21.6	20.4	31.0	19.1		69.4	10.7		217.4	8.0	
Level of Service	C	C	C	C	B		E	B		F	A	
Approach Delay (s)		21.8			25.3			13.1			17.0	
Approach LOS		C			C			B			B	

Intersection Summary				
HCM Average Control Delay	15.2	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.58			
Actuated Cycle Length (s)	49.9	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	54.9%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	128	880	16	165	952	235	41	32	79	421	36	134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.95			1.00	1.00	0.95	0.95	
Frt	1.00	1.00		1.00	0.97			1.00	0.85	1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00	0.95	0.98	
Satd. Flow (prot)	1770	5072		1770	3434			1812	1583	1681	1613	
Flt Permitted	0.95	1.00		0.95	1.00			0.97	1.00	0.95	0.98	
Satd. Flow (perm)	1770	5072		1770	3434			1812	1583	1681	1613	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	142	978	18	183	1058	261	46	36	88	468	40	149
RTOR Reduction (vph)	0	2	0	0	20	0	0	0	80	0	30	0
Lane Group Flow (vph)	142	994	0	183	1299	0	0	82	8	337	290	0
Turn Type	Prot			Prot			Split		Prot	Split		
Protected Phases	7	4		3	8		2	2	2	6	6	
Permitted Phases												
Actuated Green, G (s)	9.0	31.3		14.0	36.3			8.0	8.0	20.6	20.6	
Effective Green, g (s)	9.0	31.3		14.0	36.3			8.0	8.0	20.6	20.6	
Actuated g/C Ratio	0.10	0.35		0.16	0.40			0.09	0.09	0.23	0.23	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	177	1766		276	1387			161	141	385	370	
v/s Ratio Prot	c0.08	0.20		0.10	c0.38			c0.05	0.00	c0.20	0.18	
v/s Ratio Perm												
v/c Ratio	0.80	0.56		0.66	0.94			0.51	0.06	0.88	0.78	
Uniform Delay, d1	39.6	23.8		35.7	25.7			39.1	37.5	33.4	32.6	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2	22.4	0.4		5.9	12.0			2.5	0.2	19.3	10.4	
Delay (s)	62.0	24.2		41.6	37.7			41.6	37.7	52.7	42.9	
Level of Service	E	C		D	D			D	D	D	D	
Approach Delay (s)		28.9			38.1			39.6			48.0	
Approach LOS		C			D			D			D	

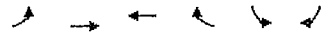
Intersection Summary				
HCM Average Control Delay	37.0	HCM Level of Service	D	
HCM Volume to Capacity ratio	0.86			
Actuated Cycle Length (s)	89.9	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	74.9%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑			↑↑		↱
Volume (veh/h)	1332	64	0	1647	0	116
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	1480	71	0	1830	0	129
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	575			607		
pX, platoon unblocked			0.86		0.70	0.86
vC, conflicting volume			1551		2431	529
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1060		960	0
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	86
cM capacity (veh/h)			560		178	930

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1
Volume Total	592	592	367	915	915	129
Volume Left	0	0	0	0	0	0
Volume Right	0	0	71	0	0	129
cSH	1700	1700	1700	1700	1700	930
Volume to Capacity	0.35	0.35	0.22	0.54	0.54	0.14
Queue Length 95th (ft)	0	0	0	0	0	12
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	9.5
Lane LOS						A
Approach Delay (s)	0.0			0.0		9.5
Approach LOS						A

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	48.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↰↰↱	↱
Volume (vph)	0	1061	1406	0	1015	299
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		0.97	0.91
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3539	3539		3432	1441
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3539	3539		3432	1441
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	1179	1562	0	1128	332
RTOR Reduction (vph)	0	0	0	0	2	10
Lane Group Flow (vph)	0	1179	1562	0	1159	289
Turn Type						Perm
Protected Phases		4	8		6	
Permitted Phases						6
Actuated Green, G (s)		60.6	60.6		51.4	51.4
Effective Green, g (s)		60.6	60.6		51.4	51.4
Actuated g/C Ratio		0.50	0.50		0.43	0.43
Clearance Time (s)		4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1787	1787		1470	617
v/s Ratio Prot		0.33	c0.44		c0.34	
v/s Ratio Perm						0.20
v/c Ratio		0.66	0.87		0.79	0.47
Uniform Delay, d1		22.0	26.3		29.6	24.5
Progression Factor		1.00	1.01		1.00	1.00
Incremental Delay, d2		0.9	2.2		4.4	2.5
Delay (s)		22.9	28.9		34.0	27.1
Level of Service		C	C		C	C
Approach Delay (s)		22.9	28.9		32.6	
Approach LOS		C	C		C	

Intersection Summary			
HCM Average Control Delay	28.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	129.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	242	1779	0	0	1708	1046	649	24	1029	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	0.97	0.95			0.91	1.00	0.95	0.91	0.95			
Frt	1.00	1.00			1.00	0.85	1.00	0.87	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99	1.00			
Satd. Flow (prot)	3433	3539			5085	1583	1681	1473	1504			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99	1.00			
Satd. Flow (perm)	3433	3539			5085	1583	1681	1473	1504			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	269	1977	0	0	1898	1162	721	27	1143	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	451	0	4	4	0	0	0
Lane Group Flow (vph)	269	1977	0	0	1898	711	649	621	613	0	0	0
Turn Type	Prot					Prot	Split		Prot			
Protected Phases	7	4			8	8	2	2	2			
Permitted Phases												
Actuated Green, G (s)	9.6	63.0			49.4	49.4	49.0	49.0	49.0			
Effective Green, g (s)	9.6	63.0			49.4	49.4	49.0	49.0	49.0			
Actuated g/C Ratio	0.08	0.52			0.41	0.41	0.41	0.41	0.41			
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0			
Lane Grp Cap (vph)	275	1858			2093	652	686	601	614			
v/s Ratio Prot	0.08	c0.56			0.37	0.45	0.39	c0.42	0.41			
v/s Ratio Perm												
v/c Ratio	0.98	1.06			0.91	1.09	0.95	1.03	1.00			
Uniform Delay, d1	55.1	28.5			33.1	35.3	34.2	35.5	35.5			
Progression Factor	0.98	0.91			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	46.3	39.8			6.1	62.3	23.4	45.8	36.1			
Delay (s)	100.5	65.8			39.3	97.6	57.6	81.3	71.6			
Level of Service	F	E			D	F	E	F	E			
Approach Delay (s)		70.0			61.4			70.0			0.0	
Approach LOS		E			E			E			A	

Intersection Summary				
HCM Average Control Delay	66.3	HCM Level of Service	E	
HCM Volume to Capacity ratio	1.05			
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	110.8%	ICU Level of Service	H	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	249	2581	259	67	2028	81	637	67	176	66	30	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		0.97	0.95		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.89		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5056		3433	3154		1770	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5056		3433	3154		1770	1863	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	277	2868	288	74	2253	90	708	74	196	73	33	91
RTOR Reduction (vph)	0	0	60	0	3	0	0	100	0	0	0	86
Lane Group Flow (vph)	277	2868	228	74	2340	0	708	170	0	73	33	5
Turn Type	Prot		Perm	Prot			Prot			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									6
Actuated Green, G (s)	23.0	80.4	80.4	6.6	64.0		29.0	26.5		10.5	8.0	8.0
Effective Green, g (s)	23.0	80.4	80.4	6.6	64.0		29.0	26.5		10.5	8.0	8.0
Actuated g/C Ratio	0.16	0.57	0.57	0.05	0.46		0.21	0.19		0.08	0.06	0.06
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	291	2920	909	83	2311		711	597		133	106	90
v/s Ratio Prot	c0.16	c0.56		0.04	0.46		c0.21	c0.05		0.04	0.02	
v/s Ratio Perm			0.14									0.00
v/c Ratio	0.95	0.98	0.25	0.89	1.01		1.00	0.29		0.55	0.31	0.06
Uniform Delay, d1	58.0	29.1	14.8	66.3	38.0		55.4	48.6		62.5	63.4	62.4
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	39.7	12.7	0.1	63.7	21.9		32.5	0.3		4.6	1.7	0.3
Delay (s)	97.7	41.8	15.0	130.1	59.9		87.9	48.9		67.0	65.0	62.7
Level of Service	F	D	B	F	E		F	D		E	E	E
Approach Delay (s)		44.1			62.1			77.1			64.7	
Approach LOS		D			E			E			E	

Intersection Summary				
HCM Average Control Delay	55.4	HCM Level of Service	E	
HCM Volume to Capacity ratio	0.90			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	89.6%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↱	↰	↑↑↑	↰↰	↱
Volume (vph)	2641	227	177	2056	312	242
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	5085	1583	1770	5085	3433	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	5085	1583	1770	5085	3433	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	2934	252	197	2284	347	269
RTOR Reduction (vph)	0	98	0	0	0	159
Lane Group Flow (vph)	2934	154	197	2284	347	110
Turn Type		Prot	Prot			Prot
Protected Phases	4	4	3	8	2	2
Permitted Phases						
Actuated Green, G (s)	50.4	50.4	10.5	64.9	13.9	13.9
Effective Green, g (s)	50.4	50.4	10.5	64.9	13.9	13.9
Actuated g/C Ratio	0.58	0.58	0.12	0.75	0.16	0.16
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2953	919	214	3802	550	253
v/s Ratio Prot	c0.58	0.10	c0.11	0.45	c0.10	0.07
v/s Ratio Perm						
v/c Ratio	0.99	0.17	0.92	0.60	0.63	0.44
Uniform Delay, d1	18.0	8.5	37.7	5.0	34.1	32.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	15.0	0.1	40.1	0.3	2.4	1.2
Delay (s)	33.0	8.5	77.8	5.3	36.4	34.1
Level of Service	C	A	E	A	D	C
Approach Delay (s)	31.1			11.0	35.4	
Approach LOS	C			B	D	

Intersection Summary				
HCM Average Control Delay	23.6	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.92			
Actuated Cycle Length (s)	86.8	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	79.7%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↱	↰↰	↑↑↑	↰	↱
Volume (vph)	2694	189	189	1973	260	260
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	0.97	0.91	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	5085	1583	3433	5085	1770	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	5085	1583	3433	5085	1770	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	2993	210	210	2192	289	289
RTOR Reduction (vph)	0	83	0	0	0	96
Lane Group Flow (vph)	2993	127	210	2192	289	193
Turn Type		Prot	Prot			Prot
Protected Phases	4	4	3	8	2	2
Permitted Phases						
Actuated Green, G (s)	54.0	54.0	6.5	64.5	16.8	16.8
Effective Green, g (s)	54.0	54.0	6.5	64.5	16.8	16.8
Actuated g/C Ratio	0.60	0.60	0.07	0.72	0.19	0.19
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	3075	957	250	3673	333	298
v/s Ratio Prot	c0.59	0.08	c0.06	0.43	c0.16	0.12
v/s Ratio Perm						
v/c Ratio	0.97	0.13	0.84	0.60	0.87	0.65
Uniform Delay, d1	17.0	7.6	40.9	6.1	35.2	33.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	10.7	0.1	21.6	0.3	20.5	4.8
Delay (s)	27.7	7.6	62.5	6.3	55.7	38.3
Level of Service	C	A	E	A	E	D
Approach Delay (s)	26.4			11.2	47.0	
Approach LOS	C			B	D	

Intersection Summary				
HCM Average Control Delay	22.4	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.94			
Actuated Cycle Length (s)	89.3	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	81.8%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	521	1825	550	184	1053	181	677	456	326	151	179	247
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.91		0.97	0.91		0.97	0.91	1.00	0.97	0.91	
Frt	1.00	0.97		1.00	0.98		1.00	1.00	0.85	1.00	0.91	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	4909		3433	4973		3433	5085	1583	3433	4643	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3433	4909		3433	4973		3433	5085	1583	3433	4643	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	579	2028	611	204	1170	201	752	507	362	168	199	274
RTOR Reduction (vph)	0	40	0	0	18	0	0	0	96	0	200	0
Lane Group Flow (vph)	579	2599	0	204	1353	0	752	507	266	168	273	0
Turn Type	Prot			Prot			Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Actuated Green, G (s)	24.5	61.7		8.3	45.5		27.3	31.2	31.2	8.9	12.8	
Effective Green, g (s)	24.5	61.7		8.3	45.5		27.3	31.2	31.2	8.9	12.8	
Actuated g/C Ratio	0.19	0.49		0.07	0.36		0.22	0.25	0.25	0.07	0.10	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	667	2402		226	1794		743	1258	392	242	471	
v/s Ratio Prot	c0.17	c0.53		0.06	0.27		c0.22	0.10		0.05	0.06	
v/s Ratio Perm									c0.17			
v/c Ratio	0.87	1.08		0.90	0.75		1.01	0.40	0.68	0.69	0.58	
Uniform Delay, d1	49.2	32.2		58.5	35.4		49.4	39.7	42.9	57.3	54.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	11.5	45.0		34.6	1.8		36.1	0.2	4.6	8.3	1.7	
Delay (s)	60.8	77.2		93.1	37.2		85.5	39.9	47.5	65.6	55.8	
Level of Service	E	E		F	D		F	D	D	E	E	
Approach Delay (s)		74.2			44.5			62.7			58.4	
Approach LOS		E			D			E			E	

Intersection Summary				
HCM Average Control Delay	63.5	HCM Level of Service	E	
HCM Volume to Capacity ratio	0.99			
Actuated Cycle Length (s)	126.1	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	94.5%	ICU Level of Service	F	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	154	1326	631	82	709	74	449	172	149	80	128	151
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	0.97	0.91		0.97	0.91		0.97	0.91		1.00	0.95	
Frt	1.00	0.95		1.00	0.99		1.00	0.93		1.00	0.92	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	4839		3433	5013		3433	4731		1770	3252	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	4839		3433	5013		3433	4731		1770	3252	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	171	1473	701	91	788	82	499	191	166	89	142	168
RTOR Reduction (vph)	0	88	0	0	13	0	0	132	0	0	136	0
Lane Group Flow (vph)	171	2086	0	91	857	0	499	225	0	89	174	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	8.3	38.2		3.6	33.5		14.0	17.0		7.3	10.3	
Effective Green, g (s)	8.3	38.2		3.6	33.5		14.0	17.0		7.3	10.3	
Actuated g/C Ratio	0.10	0.47		0.04	0.41		0.17	0.21		0.09	0.13	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	347	2252		151	2045		585	980		157	408	
v/s Ratio Prot	c0.05	c0.43		0.03	0.17		c0.15	0.05		0.05	c0.05	
v/s Ratio Perm												
v/c Ratio	0.49	0.93		0.60	0.42		0.85	0.23		0.57	0.43	
Uniform Delay, d1	34.9	20.6		38.5	17.4		33.1	27.1		35.9	33.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.1	7.2		6.6	0.1		11.6	0.1		4.6	0.7	
Delay (s)	36.0	27.8		45.2	17.5		44.6	27.2		40.5	33.9	
Level of Service	D	C		D	B		D	C		D	C	
Approach Delay (s)		28.4			20.1			37.4			35.4	
Approach LOS		C			C			D			D	

Intersection Summary				
HCM Average Control Delay	28.9	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.82			
Actuated Cycle Length (s)	82.1	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	77.6%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	49	1336	177	8	733	23	87	14	32	28	8	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	1.00		1.00	0.90		1.00	0.88	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	4996		1770	5062		1770	1669		1770	1642	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	4996		1770	5062		1770	1669		1770	1642	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	54	1484	197	9	814	26	97	16	36	31	9	34
RTOR Reduction (vph)	0	12	0	0	2	0	0	31	0	0	32	0
Lane Group Flow (vph)	54	1669	0	9	838	0	97	21	0	31	11	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	4.4	40.8		0.6	37.0		7.9	9.8		2.3	4.2	
Effective Green, g (s)	4.4	40.8		0.6	37.0		7.9	9.8		2.3	4.2	
Actuated g/C Ratio	0.06	0.59		0.01	0.53		0.11	0.14		0.03	0.06	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	112	2933		15	2695		201	235		59	99	
v/s Ratio Prot	c0.03	c0.33		0.01	0.17		c0.05	c0.01		0.02	0.01	
v/s Ratio Perm												
v/c Ratio	0.48	0.57		0.60	0.31		0.48	0.09		0.53	0.11	
Uniform Delay, d1	31.4	8.9		34.3	9.1		28.9	26.0		33.1	30.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	3.2	0.3		52.9	0.1		1.8	0.2		8.2	0.5	
Delay (s)	34.7	9.2		87.2	9.2		30.7	26.1		41.3	31.4	
Level of Service	C	A		F	A		C	C		D	C	
Approach Delay (s)		9.9			10.0			29.1			35.5	
Approach LOS		A			A			C			D	

Intersection Summary				
HCM Average Control Delay	11.7	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.50			
Actuated Cycle Length (s)	69.5	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	54.6%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	313	1015	65	22	515	25	40	46	35	24	33	214
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.94		1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5040		1770	5050		1770	1742		1770	1621	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	5040		1770	5050		1770	1742		1770	1621	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	348	1128	72	24	572	28	44	51	39	27	37	238
RTOR Reduction (vph)	0	8	0	0	7	0	0	33	0	0	203	0
Lane Group Flow (vph)	348	1192	0	24	593	0	44	57	0	27	72	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	14.8	30.2		0.7	16.1		1.4	8.2		1.4	8.2	
Effective Green, g (s)	14.8	30.2		0.7	16.1		1.4	8.2		1.4	8.2	
Actuated g/C Ratio	0.26	0.53		0.01	0.28		0.02	0.15		0.02	0.15	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	464	2694		22	1439		44	253		44	235	
v/s Ratio Prot	c0.20	c0.24		0.01	0.12		c0.02	0.03		0.02	c0.04	
v/s Ratio Perm												
v/c Ratio	0.75	0.44		1.09	0.41		1.00	0.22		0.61	0.30	
Uniform Delay, d1	19.2	8.0		27.9	16.4		27.6	21.3		27.3	21.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	6.7	0.1		221.9	0.2		135.7	0.5		22.8	0.7	
Delay (s)	25.9	8.1		249.8	16.6		163.2	21.8		50.0	22.3	
Level of Service	C	A		F	B		F	C		D	C	
Approach Delay (s)		12.1			25.5			68.2			24.8	
Approach LOS		B			C			E			C	

Intersection Summary				
HCM Average Control Delay	19.7	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.52			
Actuated Cycle Length (s)	56.5	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	59.5%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	863	195	92	449	129	255
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.91		1.00	0.91	0.97	1.00
Frt	0.97		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	4945		1770	5085	3433	1583
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	4945		1770	5085	3433	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	959	217	102	499	143	283
RTOR Reduction (vph)	64	0	0	0	0	214
Lane Group Flow (vph)	1112	0	102	499	143	69
Turn Type			Prot			Prot
Protected Phases	4		3	8	2	2
Permitted Phases						
Actuated Green, G (s)	15.8		2.6	22.4	7.9	7.9
Effective Green, g (s)	15.8		2.6	22.4	7.9	7.9
Actuated g/C Ratio	0.41		0.07	0.58	0.21	0.21
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2040		120	2974	708	327
v/s Ratio Prot	c0.22		c0.06	0.10	0.04	c0.04
v/s Ratio Perm						
v/c Ratio	0.55		0.85	0.17	0.20	0.21
Uniform Delay, d1	8.5		17.7	3.7	12.6	12.6
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3		40.4	0.0	0.1	0.3
Delay (s)	8.8		58.1	3.7	12.7	12.9
Level of Service	A		E	A	B	B
Approach Delay (s)	8.8			12.9	12.9	
Approach LOS	A			B	B	

Intersection Summary				
HCM Average Control Delay	10.7	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.47			
Actuated Cycle Length (s)	38.3	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	43.5%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	260	52	52	194	38	255	189	869	168	347	465	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.95	0.95			1.00	1.00	0.97	0.91		0.97	0.91	1.00
Frt	1.00	0.96			1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	0.98			0.96	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1658			1788	1583	3433	4962		3433	5085	1583
Flt Permitted	0.95	0.98			0.96	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1681	1658			1788	1583	3433	4962		3433	5085	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	289	58	58	216	42	283	210	966	187	386	517	84
RTOR Reduction (vph)	0	19	0	0	0	225	0	35	0	0	0	61
Lane Group Flow (vph)	205	181	0	0	258	58	210	1118	0	386	517	23
Turn Type	Split			Split		Perm	Prot			Prot		Perm
Protected Phases	2	2		6	6		3	8		7	4	
Permitted Phases						6						4
Actuated Green, G (s)	13.4	13.4			15.0	15.0	8.9	19.2		10.2	20.5	20.5
Effective Green, g (s)	13.4	13.4			15.0	15.0	8.9	19.2		10.2	20.5	20.5
Actuated g/C Ratio	0.18	0.18			0.20	0.20	0.12	0.26		0.14	0.28	0.28
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	305	301			363	322	414	1291		474	1413	440
v/s Ratio Prot	c0.12	0.11			c0.14		0.06	c0.23		c0.11	0.10	
v/s Ratio Perm						0.04						0.01
v/c Ratio	0.67	0.60			0.71	0.18	0.51	0.87		0.81	0.37	0.05
Uniform Delay, d1	28.2	27.7			27.4	24.3	30.4	26.1		30.9	21.4	19.5
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	5.7	3.4			6.4	0.3	1.0	6.3		10.3	0.2	0.1
Delay (s)	33.9	31.1			33.8	24.6	31.4	32.4		41.2	21.6	19.6
Level of Service	C	C			C	C	C	C		D	C	B
Approach Delay (s)		32.5			29.0			32.2			29.1	
Approach LOS		C			C			C			C	

Intersection Summary				
HCM Average Control Delay	30.8	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.77			
Actuated Cycle Length (s)	73.8	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				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	138	108	178	14	56	118	116	567	10	187	647	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.90		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1673		1770	3530		1770	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	1863	1583	1770	1673		1770	3530		1770	3539	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	153	120	198	16	62	131	129	630	11	208	719	117
RTOR Reduction (vph)	0	0	137	0	107	0	0	1	0	0	0	81
Lane Group Flow (vph)	153	120	61	16	86	0	129	640	0	208	719	36
Turn Type	Prot		Prot	Prot			Prot			Prot		Prot
Protected Phases	7	4	4	3	8		5	2		1	6	6
Permitted Phases												
Actuated Green, G (s)	8.6	18.7	18.7	0.7	10.8		6.8	15.4		9.8	18.4	18.4
Effective Green, g (s)	8.6	18.7	18.7	0.7	10.8		6.8	15.4		9.8	18.4	18.4
Actuated g/C Ratio	0.14	0.31	0.31	0.01	0.18		0.11	0.25		0.16	0.30	0.30
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	251	575	488	20	298		199	897		286	1075	481
v/s Ratio Prot	c0.09	0.06	0.04	0.01	c0.05		0.07	0.18		c0.12	c0.20	0.02
v/s Ratio Perm												
v/c Ratio	0.61	0.21	0.13	0.80	0.29		0.65	0.71		0.73	0.67	0.07
Uniform Delay, d1	24.4	15.5	15.1	29.9	21.6		25.8	20.6		24.1	18.4	15.0
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	4.2	0.2	0.1	110.1	0.5		7.1	2.7		8.9	1.6	0.1
Delay (s)	28.6	15.7	15.2	140.0	22.1		32.8	23.3		33.0	20.0	15.1
Level of Service	C	B	B	F	C		C	C		C	C	B
Approach Delay (s)		19.7			31.1			24.9			22.1	
Approach LOS		B			C			C			C	

Intersection Summary				
HCM Average Control Delay	23.2	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.60			
Actuated Cycle Length (s)	60.6	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	57.5%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	217	12	10	144	2	130	29	853	206	166	627	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.91		1.00	0.91	
Frt	1.00	0.93		1.00	1.00	0.85	1.00	0.97		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1735		1770	1863	1583	1770	4937		1770	5048	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1735		1770	1863	1583	1770	4937		1770	5048	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	241	13	11	160	2	144	32	948	229	184	697	36
RTOR Reduction (vph)	0	10	0	0	0	125	0	57	0	0	7	0
Lane Group Flow (vph)	241	14	0	160	2	19	32	1120	0	184	726	0
Turn Type	Prot			Prot		Prot	Prot			Prot		
Protected Phases	1	6		5	2	2	7	4		3	8	
Permitted Phases												
Actuated Green, G (s)	9.1	4.0		12.7	7.6	7.6	2.0	18.8		6.6	23.4	
Effective Green, g (s)	9.1	4.0		12.7	7.6	7.6	2.0	18.8		6.6	23.4	
Actuated g/C Ratio	0.16	0.07		0.22	0.13	0.13	0.03	0.32		0.11	0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	277	119		387	244	207	61	1598		201	2033	
v/s Ratio Prot	c0.14	0.01		0.09	0.00	c0.01	0.02	c0.23		c0.10	0.14	
v/s Ratio Perm												
v/c Ratio	0.87	0.12		0.41	0.01	0.09	0.52	0.70		0.92	0.36	
Uniform Delay, d1	23.9	25.4		19.5	22.0	22.2	27.6	17.2		25.5	12.1	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	24.3	0.4		0.7	0.0	0.2	7.9	1.4		40.3	0.1	
Delay (s)	48.3	25.8		20.2	22.0	22.4	35.5	18.6		65.8	12.2	
Level of Service	D	C		C	C	C	D	B		E	B	
Approach Delay (s)		46.2			21.3			19.0			23.0	
Approach LOS		D			C			B			C	

Intersection Summary				
HCM Average Control Delay	23.3	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.66			
Actuated Cycle Length (s)	58.1	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	59.0%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	331	244	127	33	102	18	97	417	40	26	479	280
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0	5.0		5.0		4.0	5.0		4.0	5.0	
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85		0.98		1.00	0.99		1.00	0.94	
Flt Protected	0.95	1.00	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583		1813		1770	3493		1770	3343	
Flt Permitted	0.95	1.00	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1583		1813		1770	3493		1770	3343	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	368	271	141	37	113	20	108	463	44	29	532	311
RTOR Reduction (vph)	0	0	76	0	7	0	0	8	0	0	101	0
Lane Group Flow (vph)	368	271	65	0	163	0	108	499	0	29	742	0
Turn Type	Prot		Prot	Split			Prot			Prot		
Protected Phases	7	4!	4!	8!	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	17.9	33.7	33.7		11.8		5.2	23.8		2.0	20.6	
Effective Green, g (s)	17.9	33.7	33.7		11.8		5.2	23.8		2.0	20.6	
Actuated g/C Ratio	0.24	0.46	0.46		0.16		0.07	0.32		0.03	0.28	
Clearance Time (s)	4.0	5.0	5.0		5.0		4.0	5.0		4.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	431	854	726		291		125	1131		48	937	
v/s Ratio Prot	c0.21	0.15	0.04		c0.09		c0.06	c0.14		0.02	c0.22	
v/s Ratio Perm												
v/c Ratio	0.85	0.32	0.09		0.56		0.86	0.44		0.60	0.79	
Uniform Delay, d1	26.6	12.6	11.2		28.5		33.8	19.6		35.4	24.5	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	15.1	0.2	0.1		2.5		42.1	0.3		19.6	4.6	
Delay (s)	41.6	12.8	11.3		30.9		75.9	19.9		55.0	29.1	
Level of Service	D	B	B		C		E	B		D	C	
Approach Delay (s)		26.1			30.9			29.7			30.0	
Approach LOS		C			C			C			C	

Intersection Summary				
HCM Average Control Delay	28.7	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.82			
Actuated Cycle Length (s)	73.5	Sum of lost time (s)	23.0	
Intersection Capacity Utilization	70.0%	ICU Level of Service	C	
Analysis Period (min)	15			

! Phase conflict between lane groups.
c Critical Lane Group

Movement	EBL	EBR	EBR2	NWL2	NWL	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	74	279	324	99	173	145	266	1109	95	185	721	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.97		0.97	0.91		1.00	0.91	
Frt	1.00	0.85	0.85	1.00	0.93		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1583	1583	1770	3277		3433	5025		1770	5041	
Flt Permitted	0.95	1.00	1.00	0.95	0.97		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1583	1583	1770	3277		3433	5025		1770	5041	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	82	310	360	110	192	161	296	1232	106	206	801	49
RTOR Reduction (vph)	0	0	256	0	147	0	0	15	0	0	10	0
Lane Group Flow (vph)	82	310	104	110	206	0	296	1323	0	206	840	0
Turn Type		Perm	Perm	Split			Prot			Prot		
Protected Phases	2			6	6		3	8		7	4	
Permitted Phases		2	2									
Actuated Green, G (s)	15.4	15.4	15.4	5.4	5.4		8.4	18.0		8.6	18.2	
Effective Green, g (s)	15.4	15.4	15.4	5.4	5.4		8.4	18.0		8.6	18.2	
Actuated g/C Ratio	0.24	0.24	0.24	0.09	0.09		0.13	0.28		0.14	0.29	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	430	385	385	151	279		455	1427		240	1447	
v/s Ratio Prot	0.05			0.06	c0.06		0.09	c0.26		c0.12	0.17	
v/s Ratio Perm		c0.20	0.07									
v/c Ratio	0.19	0.81	0.27	0.73	0.74		0.65	0.93		0.86	0.58	
Uniform Delay, d1	19.1	22.6	19.4	28.3	28.3		26.1	22.1		26.8	19.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	11.6	0.4	16.1	9.7		3.3	10.6		24.8	0.6	
Delay (s)	19.3	34.2	19.8	44.3	38.0		29.4	32.6		51.7	19.9	
Level of Service	B	C	B	D	D		C	C		D	B	
Approach Delay (s)	25.7				39.5			32.1			26.1	
Approach LOS	C				D			C			C	

Intersection Summary				
HCM Average Control Delay	30.1	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.85			
Actuated Cycle Length (s)	63.4	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	61.1%	ICU Level of Service	B	
Analysis Period (min)	15			

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	218	26	164	4	11	4	118	25	8	2	7	114
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	242	29	182	4	12	4	131	28	9	2	8	127

Direction, Lane #	SE 1	SE 2	NW 1	NE 1	SW 1
Volume Total (vph)	271	182	21	168	137
Volume Left (vph)	242	0	4	131	2
Volume Right (vph)	0	182	4	9	127
Hadj (s)	0.48	-0.67	-0.05	0.16	-0.52
Departure Headway (s)	5.8	4.7	5.3	5.4	4.8
Degree Utilization, x	0.44	0.24	0.03	0.25	0.18
Capacity (veh/h)	596	743	611	631	697
Control Delay (s)	12.0	7.9	8.5	10.1	8.8
Approach Delay (s)	10.4		8.5	10.1	8.8
Approach LOS	B		A	B	A

Intersection Summary				
Delay	10.0			
HCM Level of Service	A			
Intersection Capacity Utilization	46.0%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	119	52	72	57	27	9	111	780	138	6	383	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85		0.99		1.00	0.98		1.00	0.97	
Flt Protected		0.97	1.00		0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1800	1583		1784		1770	3460		1770	3444	
Flt Permitted		0.97	1.00		0.97		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1800	1583		1784		1770	3460		1770	3444	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	132	58	80	63	30	10	123	867	153	7	426	93
RTOR Reduction (vph)	0	0	68	0	5	0	0	15	0	0	22	0
Lane Group Flow (vph)	0	190	12	0	98	0	123	1005	0	7	497	0
Turn Type	Split		Prot	Split			Prot			Prot		
Protected Phases	4	4	4	8	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)		8.8	8.8		6.7		5.5	26.5		0.6	21.6	
Effective Green, g (s)		8.8	8.8		6.7		5.5	26.5		0.6	21.6	
Actuated g/C Ratio		0.15	0.15		0.11		0.09	0.45		0.01	0.37	
Clearance Time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		270	238		204		166	1565		18	1269	
v/s Ratio Prot		c0.11	0.01		c0.05		c0.07	c0.29		0.00	0.14	
v/s Ratio Perm												
v/c Ratio		0.70	0.05		0.48		0.74	0.64		0.39	0.39	
Uniform Delay, d1		23.7	21.3		24.3		25.9	12.4		28.8	13.7	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		8.1	0.1		1.8		16.2	0.9		13.4	0.2	
Delay (s)		31.7	21.4		26.1		42.1	13.3		42.2	13.9	
Level of Service		C	C		C		D	B		D	B	
Approach Delay (s)		28.7			26.1			16.4			14.2	
Approach LOS		C			C			B			B	

Intersection Summary				
HCM Average Control Delay	18.0	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.62			
Actuated Cycle Length (s)	58.6	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	51.1%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱		↰↰	↑↑					↰	↕	↱
Volume (vph)	0	665	141	631	925	0	0	0	0	906	1	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		0.97	0.95					0.95	0.91	0.95
Frt		0.97		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.95	1.00
Satd. Flow (prot)		3446		3433	3539					1681	1612	1504
Flt Permitted		1.00		0.95	1.00					0.95	0.95	1.00
Satd. Flow (perm)		3446		3433	3539					1681	1612	1504
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	739	157	701	1028	0	0	0	0	1007	1	83
RTOR Reduction (vph)	0	26	0	0	0	0	0	0	0	0	1	49
Lane Group Flow (vph)	0	870	0	701	1028	0	0	0	0	503	512	26
Turn Type				Prot						Split		Prot
Protected Phases		4		3	8					6	6	6
Permitted Phases												
Actuated Green, G (s)		18.4		15.4	37.8					23.7	23.7	23.7
Effective Green, g (s)		18.4		15.4	37.8					23.7	23.7	23.7
Actuated g/C Ratio		0.26		0.22	0.54					0.34	0.34	0.34
Clearance Time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		912		761	1925					573	550	513
v/s Ratio Prot		c0.25		c0.20	0.29					0.30	c0.32	0.02
v/s Ratio Perm												
v/c Ratio		0.95		0.92	0.53					0.88	0.93	0.05
Uniform Delay, d1		25.1		26.5	10.2					21.5	22.1	15.4
Progression Factor		1.00		1.00	1.00					1.00	1.00	1.00
Incremental Delay, d2		19.5		16.5	0.3					14.2	22.7	0.0
Delay (s)		44.6		42.9	10.5					35.7	44.9	15.4
Level of Service		D		D	B					D	D	B
Approach Delay (s)		44.6			23.6			0.0			38.6	
Approach LOS		D			C			A			D	

Intersection Summary				
HCM Average Control Delay	33.1	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.94			
Actuated Cycle Length (s)	69.5	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	87.5%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑			↑↑	↱	↰	↕	↱			
Volume (vph)	127	1468	0	0	1060	872	452	7	700	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	0.97	0.95			0.95	1.00	0.95	0.91	0.95			
Frt	1.00	1.00			1.00	0.85	1.00	0.87	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99	1.00			
Satd. Flow (prot)	3433	3539			3539	1583	1681	1469	1504			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99	1.00			
Satd. Flow (perm)	3433	3539			3539	1583	1681	1469	1504			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	141	1631	0	0	1178	969	502	8	778	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	524	0	11	11	0	0	0
Lane Group Flow (vph)	141	1631	0	0	1178	445	447	410	409	0	0	0
Turn Type	Prot					Prot	Split		Prot			
Protected Phases	7	4			8	8	2	2	2			
Permitted Phases												
Actuated Green, G (s)	3.5	31.6			24.1	24.1	19.5	19.5	19.5			
Effective Green, g (s)	3.5	31.6			24.1	24.1	19.5	19.5	19.5			
Actuated g/C Ratio	0.06	0.53			0.41	0.41	0.33	0.33	0.33			
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0			
Lane Grp Cap (vph)	203	1892			1443	646	555	485	496			
v/s Ratio Prot	0.04	c0.46			0.33	0.28	0.27	c0.28	0.27			
v/s Ratio Perm												
v/c Ratio	0.69	0.86			0.82	0.69	0.81	0.85	0.83			
Uniform Delay, d1	27.3	11.9			15.5	14.4	18.1	18.4	18.2			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	9.9	4.3			3.7	3.1	8.3	12.8	10.7			
Delay (s)	37.1	16.2			19.2	17.5	26.4	31.2	29.0			
Level of Service	D	B			B	B	C	C	C			
Approach Delay (s)		17.8			18.4			28.8			0.0	
Approach LOS		B			B			C			A	

Intersection Summary				
HCM Average Control Delay	20.8	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.86			
Actuated Cycle Length (s)	59.1	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	87.5%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	37	50	490	31	133	109	1020	220	210	1546	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.95	0.91	0.95	0.95	0.91	0.95	1.00	0.91		1.00	0.91	
Frt	1.00	0.98	0.85	1.00	0.99	0.85	1.00	0.97		1.00	1.00	
Flt Protected	0.95	0.99	1.00	0.95	0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1681	1649	1504	1681	1615	1504	1770	4950		1770	5065	
Flt Permitted	0.95	0.99	1.00	0.95	0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1681	1649	1504	1681	1615	1504	1770	4950		1770	5065	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	56	41	56	544	34	148	121	1133	244	233	1718	48
RTOR Reduction (vph)	0	7	44	0	2	105	0	36	0	0	3	0
Lane Group Flow (vph)	50	48	4	299	292	28	121	1341	0	233	1763	0
Turn Type	Split		Prot	Split		Prot	Prot			Prot		
Protected Phases	4	4	4	8	8	8	5	2		1		
Permitted Phases											6	
Actuated Green, G (s)	6.6	6.6	6.6	17.1	17.1	17.1	7.4	27.3		12.9	32.8	
Effective Green, g (s)	6.6	6.6	6.6	17.1	17.1	17.1	7.4	27.3		12.9	32.8	
Actuated g/C Ratio	0.08	0.08	0.08	0.21	0.21	0.21	0.09	0.34		0.16	0.41	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	139	136	124	360	346	322	164	1691		286	2079	
v/s Ratio Prot	c0.03	0.03	0.00	0.18	c0.18	0.02	0.07	0.27		c0.13		
v/s Ratio Perm											c0.35	
v/c Ratio	0.36	0.35	0.03	0.83	0.84	0.09	0.74	0.79		0.81	0.85	
Uniform Delay, d1	34.7	34.6	33.7	30.0	30.1	25.2	35.3	23.8		32.3	21.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.6	1.6	0.1	14.9	16.8	0.1	15.8	2.6		16.1	3.4	
Delay (s)	36.2	36.2	33.8	44.9	46.9	25.3	51.2	26.4		48.5	24.7	
Level of Service	D	D	C	D	D	C	D	C		D	C	
Approach Delay (s)		35.5			42.1			28.4			27.5	
Approach LOS		D			D			C			C	

Intersection Summary				
HCM Average Control Delay	30.5	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.77			
Actuated Cycle Length (s)	79.9	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	69.3%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	223	860	220	405	1118	0	0	769	846
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0	4.0	4.0	4.0	4.0			4.0	4.0
Lane Util. Factor				0.97	0.91	1.00	0.97	0.95			0.86	0.86
Frpb, ped/bikes				1.00	1.00	1.00	1.00	1.00			0.91	1.00
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00			1.00	1.00
Frt				1.00	1.00	0.85	1.00	1.00			0.95	0.85
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				3433	5085	1583	3433	3539			4148	1362
Flt Permitted				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)				3433	5085	1583	3433	3539			4148	1362
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	248	956	244	450	1242	0	0	854	940
RTOR Reduction (vph)	0	0	0	0	0	57	0	0	0	0	7	7
Lane Group Flow (vph)	0	0	0	248	956	187	450	1242	0	0	1317	463
Confl. Peds. (#/hr)												200
Turn Type				Split		Prot	Prot					Prot
Protected Phases				8	8	8	5	2			6	6
Permitted Phases												
Actuated Green, G (s)				16.4	16.4	16.4	10.0	40.1			26.1	26.1
Effective Green, g (s)				16.4	16.4	16.4	10.0	40.1			26.1	26.1
Actuated g/C Ratio				0.25	0.25	0.25	0.16	0.62			0.40	0.40
Clearance Time (s)				4.0	4.0	4.0	4.0	4.0			4.0	4.0
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)				873	1293	402	532	2200			1678	551
v/s Ratio Prot				0.07	c0.19	0.12	c0.13	0.35			0.32	c0.34
v/s Ratio Perm												
v/c Ratio				0.28	0.74	0.47	0.85	0.56			0.79	0.84
Uniform Delay, d1				19.3	22.1	20.3	26.5	7.1			16.8	17.3
Progression Factor				1.00	1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2				0.2	2.3	0.9	11.8	0.3			2.5	11.1
Delay (s)				19.5	24.3	21.2	38.3	7.4			19.2	28.5
Level of Service				B	C	C	D	A			B	C
Approach Delay (s)		0.0			23.0			15.7			21.7	
Approach LOS		A			C			B			C	

Intersection Summary				
HCM Average Control Delay	20.0	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.81			
Actuated Cycle Length (s)	64.5	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	114.6%	ICU Level of Service	H	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	537	1031	133	0	0	0	0	924	442	295	655	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Lane Util. Factor	0.91	0.86	0.91					0.86		1.00	0.91	
Frt	1.00	1.00	0.85					0.95		1.00	1.00	
Flt Protected	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	1610	3190	1441					6097		1770	5085	
Flt Permitted	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	1610	3190	1441					6097		1770	5085	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	597	1146	148	0	0	0	0	1027	491	328	728	0
RTOR Reduction (vph)	0	1	80	0	0	0	0	42	0	0	0	0
Lane Group Flow (vph)	537	1220	53	0	0	0	0	1476	0	328	728	0
Turn Type	Split		Prot							Prot		
Protected Phases	4	4	4					2		1	6	
Permitted Phases												
Actuated Green, G (s)	36.0	36.0	36.0					24.0		17.9	45.9	
Effective Green, g (s)	36.0	36.0	36.0					24.0		17.9	45.9	
Actuated g/C Ratio	0.40	0.40	0.40					0.27		0.20	0.51	
Clearance Time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	645	1277	577					1628		352	2596	
v/s Ratio Prot	0.33	c0.38	0.04					c0.24		c0.19	0.14	
v/s Ratio Perm												
v/c Ratio	0.83	0.96	0.09					1.04dr		0.93	0.28	
Uniform Delay, d1	24.2	26.2	16.8					31.9		35.4	12.6	
Progression Factor	1.00	1.00	1.00					1.00		1.00	1.00	
Incremental Delay, d2	9.0	15.7	0.1					7.6		30.9	0.1	
Delay (s)	33.3	41.8	16.8					39.5		66.3	12.6	
Level of Service	C	D	B					D		E	B	
Approach Delay (s)		37.6			0.0			39.5			29.3	
Approach LOS		D			A			D			C	

Intersection Summary				
HCM Average Control Delay	36.3	HCM Level of Service	D	
HCM Volume to Capacity ratio	0.93			
Actuated Cycle Length (s)	89.9	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	114.6%	ICU Level of Service	H	
Analysis Period (min)	15			

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group

Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Volume (vph)	68	403	0	374	97	31	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		0.95		1.00	1.00
Frt	1.00	1.00		0.97		1.00	0.85
Flt Protected	0.95	1.00		1.00		0.95	1.00
Satd. Flow (prot)	1770	3539		3430		1770	1583
Flt Permitted	0.95	1.00		1.00		0.95	1.00
Satd. Flow (perm)	1770	3539		3430		1770	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	76	448	0	416	108	34	52
RTOR Reduction (vph)	0	0	0	46	0	0	46
Lane Group Flow (vph)	76	448	0	478	0	34	6
Turn Type	Prot		Prot				Prot
Protected Phases	7	4	3	8		6	6
Permitted Phases							
Actuated Green, G (s)	1.3	13.6		8.3		3.0	3.0
Effective Green, g (s)	1.3	13.6		8.3		3.0	3.0
Actuated g/C Ratio	0.05	0.55		0.34		0.12	0.12
Clearance Time (s)	4.0	4.0		4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0		3.0	3.0
Lane Grp Cap (vph)	94	1957		1157		216	193
v/s Ratio Prot	c0.04	0.13		c0.14		c0.02	0.00
v/s Ratio Perm							
v/c Ratio	0.81	0.23		0.41		0.16	0.03
Uniform Delay, d1	11.5	2.8		6.3		9.7	9.5
Progression Factor	1.00	1.00		1.00		1.00	1.00
Incremental Delay, d2	38.1	0.1		0.2		0.3	0.1
Delay (s)	49.6	2.9		6.5		10.0	9.6
Level of Service	D	A		A		B	A
Approach Delay (s)		9.7		6.5		9.8	
Approach LOS		A		A		A	

Intersection Summary				
HCM Average Control Delay	8.2	HCM Level of Service	A	
HCM Volume to Capacity ratio	0.39			
Actuated Cycle Length (s)	24.6	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	30.5%	ICU Level of Service	A	
Analysis Period (min)	15			

c Critical Lane Group

Movement	EBL	EBR	EBR2	WBL	WBT	WBR	NBL	NBT	NBR2	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	123	293	331	126	162	99	370	850	332	272	175	148
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.88	1.00	1.00	1.00		1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.85	0.85	1.00	0.94		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	2787	1583	1770	1757		1770	3539	1583	3433	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	2787	1583	1770	1757		1770	3539	1583	3433	3539	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	137	326	368	140	180	110	411	944	369	302	194	164
RTOR Reduction (vph)	0	0	301	0	26	0	0	0	241	0	0	131
Lane Group Flow (vph)	137	326	67	140	264	0	411	944	128	302	194	33
Turn Type	Prot	custom	custom	Prot			Prot		Prot	Prot		Prot
Protected Phases	7			3	8		5	2	2	1	6	6
Permitted Phases		4	4									
Actuated Green, G (s)	9.5	14.7	14.7	11.7	16.9		22.0	28.0	28.0	10.4	16.4	16.4
Effective Green, g (s)	9.5	14.7	14.7	11.7	16.9		22.0	28.0	28.0	10.4	16.4	16.4
Actuated g/C Ratio	0.12	0.18	0.18	0.14	0.21		0.27	0.35	0.35	0.13	0.20	0.20
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	208	507	288	256	367		482	1226	549	442	718	321
v/s Ratio Prot	c0.08			0.08	c0.15		c0.23	c0.27	0.08	0.09	0.05	0.02
v/s Ratio Perm		0.12	0.04									
v/c Ratio	0.66	0.64	0.23	0.55	0.72		0.85	0.77	0.23	0.68	0.27	0.10
Uniform Delay, d1	34.1	30.6	28.2	32.1	29.7		27.9	23.5	18.8	33.6	27.2	26.2
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	7.3	2.8	0.4	2.4	6.6		13.6	3.0	0.2	4.3	0.2	0.1
Delay (s)	41.4	33.4	28.6	34.5	36.4		41.5	26.5	19.0	38.0	27.4	26.4
Level of Service	D	C	C	C	D		D	C	B	D	C	C
Approach Delay (s)					35.7			28.5			32.0	
Approach LOS					D			C			C	

Intersection Summary				
HCM Average Control Delay	30.9	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.71			
Actuated Cycle Length (s)	80.8	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	66.0%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	935	0	221	0	0	0	0	667	213	358	267	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95	1.00					0.95		0.97	0.95	
Frt	1.00	1.00	0.85					0.96		1.00	1.00	
Flt Protected	0.95	0.95	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	1681	1681	1583					3411		3433	3539	
Flt Permitted	0.95	0.95	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	1681	1681	1583					3411		3433	3539	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1039	0	246	0	0	0	0	741	237	398	297	0
RTOR Reduction (vph)	0	0	160	0	0	0	0	48	0	0	0	0
Lane Group Flow (vph)	519	520	86	0	0	0	0	930	0	398	297	0
Turn Type	Split		Prot							Prot		
Protected Phases	4	4	4					2		1	6	
Permitted Phases												
Actuated Green, G (s)	22.2	22.2	22.2					20.4		9.0	33.4	
Effective Green, g (s)	22.2	22.2	22.2					20.4		9.0	33.4	
Actuated g/C Ratio	0.35	0.35	0.35					0.32		0.14	0.53	
Clearance Time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	587	587	553					1094		486	1859	
v/s Ratio Prot	0.31	c0.31	0.05					c0.27		c0.12	0.08	
v/s Ratio Perm												
v/c Ratio	0.88	0.89	0.16					0.85		0.82	0.16	
Uniform Delay, d1	19.5	19.5	14.2					20.2		26.5	7.8	
Progression Factor	1.00	1.00	1.00					1.00		1.00	1.00	
Incremental Delay, d2	14.7	14.9	0.1					6.5		10.3	0.0	
Delay (s)	34.2	34.4	14.4					26.7		36.9	7.9	
Level of Service	C	C	B					C		D	A	
Approach Delay (s)		30.5			0.0			26.7			24.5	
Approach LOS		C			A			C			C	

Intersection Summary				
HCM Average Control Delay	27.8	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.86			
Actuated Cycle Length (s)	63.6	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	71.4%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	131	488	48	94	437	412	58	132	107	237	54	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		0.97	1.00	
Frt	1.00	0.99		1.00	0.93		1.00	0.93		1.00	0.92	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3492		1770	3282		1770	1738		3433	1708	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3492		1770	3282		1770	1738		3433	1708	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	146	542	53	104	486	458	64	147	119	263	60	74
RTOR Reduction (vph)	0	11	0	0	252	0	0	47	0	0	52	0
Lane Group Flow (vph)	146	584	0	104	692	0	64	219	0	263	82	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												
Actuated Green, G (s)	6.1	16.9		5.0	15.8		4.7	13.7		9.5	18.5	
Effective Green, g (s)	6.1	16.9		5.0	15.8		4.7	13.7		9.5	18.5	
Actuated g/C Ratio	0.10	0.28		0.08	0.26		0.08	0.22		0.16	0.30	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	177	966		145	849		136	390		534	517	
v/s Ratio Prot	c0.08	0.17		0.06	c0.21		0.04	c0.13		c0.08	0.05	
v/s Ratio Perm												
v/c Ratio	0.82	0.60		0.72	0.81		0.47	0.56		0.49	0.16	
Uniform Delay, d1	27.0	19.2		27.4	21.3		27.0	21.0		23.6	15.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	25.7	1.1		15.5	6.1		2.6	1.9		0.7	0.1	
Delay (s)	52.7	20.3		42.9	27.3		29.6	22.9		24.3	15.7	
Level of Service	D	C		D	C		C	C		C	B	
Approach Delay (s)		26.7			28.9			24.2			21.4	
Approach LOS		C			C			C			C	

Intersection Summary				
HCM Average Control Delay	26.4	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.67			
Actuated Cycle Length (s)	61.1	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	66.1%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	WBL	WBR	SEL	SET	NWT	NWR	NWR2	SWL	SWR
Lane Configurations									
Volume (vph)	0	0	277	508	640	0	196	151	273
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor			0.97	0.95	0.95		1.00	0.97	1.00
Frt			1.00	1.00	1.00		0.85	1.00	0.85
Flt Protected			0.95	1.00	1.00		1.00	0.95	1.00
Satd. Flow (prot)			3433	3539	3539		1583	3433	1583
Flt Permitted			0.95	1.00	1.00		1.00	0.95	1.00
Satd. Flow (perm)			3433	3539	3539		1583	3433	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	308	564	711	0	218	168	303
RTOR Reduction (vph)	0	0	0	0	0	0	136	0	207
Lane Group Flow (vph)	0	0	308	564	711	0	82	168	96
Turn Type			Prot				Perm		Perm
Protected Phases			5	2	6			4	
Permitted Phases							6		4
Actuated Green, G (s)			4.1	22.9	14.8		14.8	8.3	8.3
Effective Green, g (s)			4.1	22.9	14.8		14.8	8.3	8.3
Actuated g/C Ratio			0.10	0.58	0.38		0.38	0.21	0.21
Clearance Time (s)			4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)			3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)			359	2067	1336		598	727	335
v/s Ratio Prot			c0.09	0.16	c0.20			0.05	
v/s Ratio Perm							0.05		c0.06
v/c Ratio			0.86	0.27	0.53		0.14	0.23	0.29
Uniform Delay, d1			17.3	4.0	9.5		8.0	12.8	13.0
Progression Factor			1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2			18.0	0.1	0.4		0.1	0.2	0.5
Delay (s)			35.2	4.1	9.9		8.1	13.0	13.4
Level of Service			D	A	A		A	B	B
Approach Delay (s)	0.0			15.1	9.5			13.3	
Approach LOS	A			B	A			B	

Intersection Summary				
HCM Average Control Delay	12.4	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.51			
Actuated Cycle Length (s)	39.2	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	41.3%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL2	EBL	EBR	SEL	SET	SER	NWL	NWT	NWR	SWL	SWR
Lane Configurations											
Volume (vph)	411	0	248	293	386	0	0	413	263	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		
Lane Util. Factor	0.95	0.95	1.00	0.97	0.95			0.95	1.00		
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		
Flt Protected	0.95	0.95	1.00	0.95	1.00			1.00	1.00		
Satd. Flow (prot)	1681	1681	1583	3433	3539			3539	1583		
Flt Permitted	0.95	0.95	1.00	0.95	1.00			1.00	1.00		
Satd. Flow (perm)	1681	1681	1583	3433	3539			3539	1583		
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	457	0	276	326	429	0	0	459	292	0	0
RTOR Reduction (vph)	0	0	200	0	0	0	0	0	205	0	0
Lane Group Flow (vph)	228	229	76	326	429	0	0	459	87	0	0
Turn Type	Split		Prot	Prot					Prot		
Protected Phases	4	4	4	1	6			2	2		
Permitted Phases											
Actuated Green, G (s)	11.2	11.2	11.2	5.2	21.3			12.1	12.1		
Effective Green, g (s)	11.2	11.2	11.2	5.2	21.3			12.1	12.1		
Actuated g/C Ratio	0.28	0.28	0.28	0.13	0.53			0.30	0.30		
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0		
Lane Grp Cap (vph)	465	465	438	441	1861			1057	473		
v/s Ratio Prot	0.14	c0.14	0.05	c0.09	0.12			c0.13	0.06		
v/s Ratio Perm											
v/c Ratio	0.49	0.49	0.17	0.74	0.23			0.43	0.18		
Uniform Delay, d1	12.3	12.3	11.1	17.0	5.2			11.4	10.5		
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00	1.00		
Incremental Delay, d2	0.8	0.8	0.2	6.4	0.1			0.3	0.2		
Delay (s)	13.1	13.1	11.3	23.4	5.2			11.7	10.7		
Level of Service	B	B	B	C	A			B	B		
Approach Delay (s)		12.4			13.1			11.3		0.0	
Approach LOS		B			B			B		A	

Intersection Summary				
HCM Average Control Delay	12.3	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.51			
Actuated Cycle Length (s)	40.5	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	41.2%	ICU Level of Service	A	
Analysis Period (min)	15			

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	5	5	4	57	12	10	12	793	103	15	453	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	5	4	62	13	11	13	862	112	16	492	11

Direction, Lane #	EB 1	WB 1	NE 1	NE 2	SW 1	SW 2
Volume Total (vph)	15	86	444	543	263	257
Volume Left (vph)	5	62	13	0	16	0
Volume Right (vph)	4	11	0	112	0	11
Hadj (s)	-0.07	0.10	0.05	-0.11	0.07	0.00
Departure Headway (s)	6.8	6.6	5.5	5.4	6.1	6.0
Degree Utilization, x	0.03	0.16	0.68	0.81	0.44	0.43
Capacity (veh/h)	498	513	634	659	574	579
Control Delay (s)	10.0	10.9	18.4	26.1	12.7	12.3
Approach Delay (s)	10.0	10.9	22.6		12.5	
Approach LOS	A	B	C		B	

Intersection Summary				
Delay	18.6			
HCM Level of Service	C			
Intersection Capacity Utilization	48.8%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	380	521	701	460	10	460	5	203	10	10	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95		0.95	0.95	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85		0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.95	1.00		0.98	
Satd. Flow (prot)	1770	3539	1583	3433	3528		1681	1687	1583		1750	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.74	0.71	1.00		0.89	
Satd. Flow (perm)	1770	3539	1583	3433	3528		1302	1251	1583		1579	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	11	422	579	779	511	11	511	6	226	11	11	11
RTOR Reduction (vph)	0	0	408	0	2	0	0	0	169	0	8	0
Lane Group Flow (vph)	11	422	171	779	520	0	261	256	57	0	25	0
Turn Type	Prot		Perm	Prot			Perm		Perm	Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases			4				2		2	6		
Actuated Green, G (s)	0.8	17.4	17.4	14.6	31.2		14.9	14.9	14.9		14.9	
Effective Green, g (s)	0.8	17.4	17.4	14.6	31.2		14.9	14.9	14.9		14.9	
Actuated g/C Ratio	0.01	0.30	0.30	0.25	0.53		0.25	0.25	0.25		0.25	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	24	1045	468	851	1869		329	316	400		399	
v/s Ratio Prot	0.01	c0.12		c0.23	0.15							
v/s Ratio Perm			0.11				0.20	c0.20	0.04		0.02	
v/c Ratio	0.46	0.40	0.37	0.92	0.28		0.79	0.81	0.14		0.06	
Uniform Delay, d1	28.8	16.6	16.4	21.5	7.6		20.6	20.7	17.1		16.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	13.2	0.3	0.5	14.3	0.1		12.3	14.5	0.2		0.1	
Delay (s)	42.1	16.9	16.9	35.8	7.7		32.9	35.1	17.2		16.8	
Level of Service	D	B	B	D	A		C	D	B		B	
Approach Delay (s)		17.1			24.5			28.9			16.8	
Approach LOS		B			C			C			B	

Intersection Summary				
HCM Average Control Delay	23.1	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.69			
Actuated Cycle Length (s)	58.9	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	65.6%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Volume (vph)	541	390	0	355	383	340	912
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00		1.00	1.00	1.00	0.95
Frt	1.00	0.85		1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00		1.00	1.00	0.95	1.00
Satd. Flow (prot)	3433	1583		1863	1583	1770	3539
Flt Permitted	0.95	1.00		1.00	1.00	0.95	1.00
Satd. Flow (perm)	3433	1583		1863	1583	1770	3539
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	601	433	0	394	426	378	1013
RTOR Reduction (vph)	0	286	0	0	323	0	0
Lane Group Flow (vph)	601	147	0	394	103	378	1013
Turn Type		Perm	Prot		Perm	Prot	
Protected Phases	1		3	8		7	
Permitted Phases		1			8		6
Actuated Green, G (s)	23.0	23.0		16.3	16.3	16.4	23.0
Effective Green, g (s)	23.0	23.0		16.3	16.3	16.4	23.0
Actuated g/C Ratio	0.34	0.34		0.24	0.24	0.24	0.34
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1166	538		449	381	429	1202
v/s Ratio Prot	0.18			c0.21		c0.21	
v/s Ratio Perm		0.09			0.06		c0.29
v/c Ratio	0.52	0.27		0.88	0.27	0.88	0.84
Uniform Delay, d1	17.9	16.3		24.7	20.9	24.7	20.7
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.3		17.3	0.4	18.6	5.5
Delay (s)	18.3	16.5		42.0	21.2	43.3	26.2
Level of Service	B	B		D	C	D	C
Approach Delay (s)	17.6			31.2			30.9
Approach LOS	B			C			C

Intersection Summary				
HCM Average Control Delay	26.7	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.86			
Actuated Cycle Length (s)	67.7	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	63.0%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Volume (vph)	95	8	0	519	52	3	944
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0		4.0	4.0
Lane Util. Factor	0.97			0.95		1.00	0.95
Frt	0.99			0.99		1.00	1.00
Flt Protected	0.96			1.00		0.95	1.00
Satd. Flow (prot)	3414			3491		1770	3539
Flt Permitted	0.96			1.00		0.95	1.00
Satd. Flow (perm)	3414			3491		1770	3539
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	106	9	0	577	58	3	1049
RTOR Reduction (vph)	8	0	0	11	0	0	0
Lane Group Flow (vph)	107	0	0	624	0	3	1049
Turn Type			Prot			Prot	
Protected Phases	8		5	2		1	6
Permitted Phases							
Actuated Green, G (s)	3.4			17.7		0.6	22.3
Effective Green, g (s)	3.4			17.7		0.6	22.3
Actuated g/C Ratio	0.10			0.53		0.02	0.66
Clearance Time (s)	4.0			4.0		4.0	4.0
Vehicle Extension (s)	3.0			3.0		3.0	3.0
Lane Grp Cap (vph)	344			1834		32	2342
v/s Ratio Prot	c0.03			0.18		0.00	c0.30
v/s Ratio Perm							
v/c Ratio	0.31			0.34		0.09	0.45
Uniform Delay, d1	14.1			4.6		16.3	2.7
Progression Factor	1.00			1.00		1.00	1.00
Incremental Delay, d2	0.5			0.1		1.3	0.1
Delay (s)	14.6			4.7		17.6	2.9
Level of Service	B			A		B	A
Approach Delay (s)	14.6			4.7			2.9
Approach LOS	B			A			A

Intersection Summary			
HCM Average Control Delay	4.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	33.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	36.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	26	114	21	72	84	168	6	358	18	165	775	107
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	0.90		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1820		1770	1676		1770	3514		1770	3475	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1820		1770	1676		1770	3514		1770	3475	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	29	127	23	80	93	187	7	398	20	183	861	119
RTOR Reduction (vph)	0	12	0	0	123	0	0	6	0	0	15	0
Lane Group Flow (vph)	29	138	0	80	157	0	7	412	0	183	965	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	0.8	10.9		2.8	12.9		0.7	15.0		5.3	19.6	
Effective Green, g (s)	0.8	10.9		2.8	12.9		0.7	15.0		5.3	19.6	
Actuated g/C Ratio	0.02	0.22		0.06	0.26		0.01	0.30		0.11	0.39	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	28	397		99	432		25	1054		188	1362	
v/s Ratio Prot	0.02	0.08		c0.05	c0.09		0.00	0.12		c0.10	c0.28	
v/s Ratio Perm												
v/c Ratio	1.04	0.35		0.81	0.36		0.28	0.39		0.97	0.71	
Uniform Delay, d1	24.6	16.5		23.3	15.2		24.4	13.9		22.3	12.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	181.3	0.5		36.6	0.5		6.0	0.2		57.5	1.7	
Delay (s)	205.9	17.1		59.9	15.7		30.4	14.1		79.8	14.5	
Level of Service	F	B		E	B		C	B		E	B	
Approach Delay (s)		47.7			25.5			14.4			24.8	
Approach LOS		D			C			B			C	

Intersection Summary			
HCM Average Control Delay	24.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	50.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	6	85	79	106	141	41	41	381	59	42	874	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.97		1.00	0.98		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1799		1770	3468		1770	3535	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1583	1770	1799		1770	3468		1770	3535	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	7	94	88	118	157	46	46	423	66	47	971	8
RTOR Reduction (vph)	0	0	72	0	19	0	0	18	0	0	1	0
Lane Group Flow (vph)	7	94	16	118	184	0	46	471	0	47	978	0
Turn Type	Prot		Perm	Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	0.6	8.7	8.7	3.5	11.6		1.2	19.7		1.2	19.7	
Effective Green, g (s)	0.6	8.7	8.7	3.5	11.6		1.2	19.7		1.2	19.7	
Actuated g/C Ratio	0.01	0.18	0.18	0.07	0.24		0.02	0.40		0.02	0.40	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	22	330	280	126	425		43	1391		43	1418	
v/s Ratio Prot	0.00	0.05		c0.07	c0.10		0.03	0.14		c0.03	c0.28	
v/s Ratio Perm			0.01									
v/c Ratio	0.32	0.28	0.06	0.94	0.43		1.07	0.34		1.09	0.69	
Uniform Delay, d1	24.0	17.5	16.8	22.7	16.0		24.0	10.2		24.0	12.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	8.2	0.5	0.1	60.2	0.7		158.5	0.1		165.9	1.4	
Delay (s)	32.2	18.0	16.9	82.9	16.7		182.5	10.3		189.9	13.6	
Level of Service	C	B	B	F	B		F	B		F	B	
Approach Delay (s)		18.0			41.0			25.1			21.7	
Approach LOS		B			D			C			C	

Intersection Summary				
HCM Average Control Delay	25.2	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.66			
Actuated Cycle Length (s)	49.1	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	50.3%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	130	1002	40	105	1165	245	80	60	172	492	40	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.95			1.00	1.00	0.95	0.95	
Frt	1.00	0.99		1.00	0.97			1.00	0.85	1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00	0.95	0.97	
Satd. Flow (prot)	1770	5056		1770	3447			1811	1583	1681	1635	
Flt Permitted	0.95	1.00		0.95	1.00			0.51	1.00	0.63	0.72	
Satd. Flow (perm)	1770	5056		1770	3447			956	1583	1120	1211	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	144	1113	44	117	1294	272	89	67	191	547	44	122
RTOR Reduction (vph)	0	5	0	0	22	0	0	0	127	0	24	0
Lane Group Flow (vph)	144	1152	0	117	1544	0	0	156	64	356	333	0
Turn Type	Prot			Prot			Perm		Perm	Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2		2	6		
Actuated Green, G (s)	5.6	33.3		7.6	35.3			26.7	26.7	26.7	26.7	
Effective Green, g (s)	5.6	33.3		7.6	35.3			26.7	26.7	26.7	26.7	
Actuated g/C Ratio	0.07	0.42		0.10	0.44			0.34	0.34	0.34	0.34	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	125	2115		169	1529			321	531	376	406	
v/s Ratio Prot	c0.08	0.23		0.07	c0.45							
v/s Ratio Perm								0.16	0.04	c0.32	0.27	
v/c Ratio	1.15	0.54		0.69	1.01			0.49	0.12	0.95	0.82	
Uniform Delay, d1	37.0	17.4		34.9	22.2			21.0	18.3	25.8	24.3	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2	127.1	0.3		11.6	25.5			1.2	0.1	32.6	12.5	
Delay (s)	164.1	17.7		46.5	47.6			22.2	18.4	58.4	36.7	
Level of Service	F	B		D	D			C	B	E	D	
Approach Delay (s)		33.9			47.6			20.1			47.5	
Approach LOS		C			D			C			D	

Intersection Summary				
HCM Average Control Delay	40.8	HCM Level of Service	D	
HCM Volume to Capacity ratio	0.94			
Actuated Cycle Length (s)	79.6	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	86.2%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1546	60	0	1607	0	202
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	1718	67	0	1786	0	224
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	575			607		
pX, platoon unblocked			0.86		0.90	0.86
vC, conflicting volume			1784		2644	606
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1328		1927	0
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	76
cM capacity (veh/h)			442		53	928

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1
Volume Total	687	687	410	893	893	224
Volume Left	0	0	0	0	0	0
Volume Right	0	0	67	0	0	224
cSH	1700	1700	1700	1700	1700	928
Volume to Capacity	0.40	0.40	0.24	0.53	0.53	0.24
Queue Length 95th (ft)	0	0	0	0	0	24
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	10.1
Lane LOS						B
Approach Delay (s)	0.0			0.0		10.1
Approach LOS						B

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	50.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	0	1088	1059	0	976	550
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		0.97	0.91
Frt		1.00	1.00		0.99	0.85
Flt Protected		1.00	1.00		0.96	1.00
Satd. Flow (prot)		3539	3539		3416	1441
Flt Permitted		1.00	1.00		0.96	1.00
Satd. Flow (perm)		3539	3539		3416	1441
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	1209	1177	0	1084	611
RTOR Reduction (vph)	0	0	0	0	11	11
Lane Group Flow (vph)	0	1209	1177	0	1159	514
Turn Type						Perm
Protected Phases		4	8		6	
Permitted Phases						6
Actuated Green, G (s)		19.5	19.5		20.8	20.8
Effective Green, g (s)		19.5	19.5		20.8	20.8
Actuated g/C Ratio		0.40	0.40		0.43	0.43
Clearance Time (s)		4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1429	1429		1471	621
v/s Ratio Prot		c0.34	0.33		0.34	
v/s Ratio Perm						c0.36
v/c Ratio		0.85	0.82		0.79	0.83
Uniform Delay, d1		13.0	12.9		11.8	12.2
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		4.8	4.0		2.9	8.9
Delay (s)		17.9	16.9		14.7	21.0
Level of Service		B	B		B	C
Approach Delay (s)		17.9	16.9		16.7	
Approach LOS		B	B		B	

Intersection Summary			
HCM Average Control Delay	17.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	48.3	Sum of lost time (s)	8.0
Intersection Capacity Utilization	155.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	370	1804	0	0	1997	844	400	60	1302	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	0.97	0.95			0.91	1.00	0.95	0.91	0.95			
Frt	1.00	1.00			1.00	0.85	1.00	0.87	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (prot)	3433	3539			5085	1583	1681	1472	1504			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (perm)	3433	3539			5085	1583	1681	1472	1504			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	411	2004	0	0	2219	938	444	67	1447	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	340	0	2	2	0	0	0
Lane Group Flow (vph)	411	2004	0	0	2219	598	400	789	765	0	0	0
Turn Type	Prot					Perm	Split		Perm			
Protected Phases	7	4			8		2	2				
Permitted Phases						8			2			
Actuated Green, G (s)	11.0	54.0			39.0	39.0	48.0	48.0	48.0			
Effective Green, g (s)	11.0	54.0			39.0	39.0	48.0	48.0	48.0			
Actuated g/C Ratio	0.10	0.49			0.35	0.35	0.44	0.44	0.44			
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0			
Lane Grp Cap (vph)	343	1737			1803	561	734	642	656			
v/s Ratio Prot	0.12	c0.57			c0.44		0.24	c0.54				
v/s Ratio Perm						0.38			0.51			
v/c Ratio	1.20	1.15			1.23	1.07	0.54	1.23	1.17			
Uniform Delay, d1	49.5	28.0			35.5	35.5	22.9	31.0	31.0			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	114.0	76.2			108.9	56.7	0.8	116.2	90.5			
Delay (s)	163.5	104.2			144.4	92.2	23.8	147.2	121.5			
Level of Service	F	F			F	F	C	F	F			
Approach Delay (s)		114.3			128.9			111.9			0.0	
Approach LOS		F			F			F			A	

Intersection Summary				
HCM Average Control Delay	119.8	HCM Level of Service	F	
HCM Volume to Capacity ratio	1.24			
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	110.3%	ICU Level of Service	H	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	120	1905	840	225	1954	125	290	30	62	152	70	400
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		0.97	0.95		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.90		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5039		3433	3180		1770	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5039		3433	3180		1770	1863	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	133	2117	933	250	2171	139	322	33	69	169	78	444
RTOR Reduction (vph)	0	0	366	0	6	0	0	56	0	0	0	126
Lane Group Flow (vph)	133	2117	567	250	2304	0	322	46	0	169	78	318
Turn Type	Prot		Perm	Prot			Prot			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									6
Actuated Green, G (s)	9.6	45.0	45.0	15.9	51.3		10.9	20.1		13.0	22.2	22.2
Effective Green, g (s)	9.6	45.0	45.0	15.9	51.3		10.9	20.1		13.0	22.2	22.2
Actuated g/C Ratio	0.09	0.41	0.41	0.14	0.47		0.10	0.18		0.12	0.20	0.20
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	154	2080	648	256	2350		340	581		209	376	319
v/s Ratio Prot	0.08	0.42		c0.14	c0.46		c0.09	0.01		0.10	0.04	
v/s Ratio Perm			0.36									c0.20
v/c Ratio	0.86	1.02	0.88	0.98	0.98		0.95	0.08		0.81	0.21	1.00
Uniform Delay, d1	49.6	32.5	29.9	46.9	28.9		49.3	37.3		47.3	36.6	43.9
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	36.1	24.3	12.6	49.2	14.2		34.8	0.1		20.1	0.3	49.1
Delay (s)	85.7	56.8	42.5	96.1	43.0		84.1	37.3		67.4	36.8	93.0
Level of Service	F	E	D	F	D		F	D		E	D	F
Approach Delay (s)		53.8			48.2			72.8			80.4	
Approach LOS		D			D			E			F	

Intersection Summary				
HCM Average Control Delay	55.6	HCM Level of Service	E	
HCM Volume to Capacity ratio	0.93			
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	83.6%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↱	↰	↑↑↑	↰↰	↱
Volume (vph)	1977	192	150	2184	88	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	5085	1583	1770	5085	3433	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	5085	1583	1770	5085	3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2149	209	163	2374	96	74
RTOR Reduction (vph)	0	93	0	0	0	67
Lane Group Flow (vph)	2149	116	163	2374	96	7
Turn Type		Perm	Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	32.3	32.3	8.0	44.3	5.7	5.7
Effective Green, g (s)	32.3	32.3	8.0	44.3	5.7	5.7
Actuated g/C Ratio	0.56	0.56	0.14	0.76	0.10	0.10
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2832	882	244	3884	337	156
v/s Ratio Prot	c0.42		0.09	c0.47	c0.03	
v/s Ratio Perm		0.07				0.00
v/c Ratio	0.76	0.13	0.67	0.61	0.28	0.05
Uniform Delay, d1	9.9	6.1	23.7	3.0	24.3	23.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.2	0.1	6.8	0.3	0.5	0.1
Delay (s)	11.1	6.2	30.5	3.3	24.7	23.8
Level of Service	B	A	C	A	C	C
Approach Delay (s)	10.6			5.1	24.3	
Approach LOS	B			A	C	

Intersection Summary				
HCM Average Control Delay	8.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	58.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	59.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↱	↰↰	↑↑↑	↰	↱
Volume (vph)	1885	160	160	2261	73	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	0.97	0.91	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	5085	1583	3433	5085	1770	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	5085	1583	3433	5085	1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2049	174	174	2458	79	79
RTOR Reduction (vph)	0	75	0	0	0	69
Lane Group Flow (vph)	2049	99	174	2458	79	10
Turn Type		Perm	Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	28.5	28.5	3.4	35.9	6.2	6.2
Effective Green, g (s)	28.5	28.5	3.4	35.9	6.2	6.2
Actuated g/C Ratio	0.57	0.57	0.07	0.72	0.12	0.12
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2893	901	233	3644	219	196
v/s Ratio Prot	0.40		0.05	c0.48	c0.04	
v/s Ratio Perm		0.06				0.01
v/c Ratio	0.71	0.11	0.75	0.67	0.36	0.05
Uniform Delay, d1	7.8	5.0	22.9	3.9	20.1	19.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.8	0.1	12.3	0.5	1.0	0.1
Delay (s)	8.6	5.0	35.2	4.4	21.1	19.5
Level of Service	A	A	D	A	C	B
Approach Delay (s)	8.3			6.4	20.3	
Approach LOS	A			A	C	

Intersection Summary				
HCM Average Control Delay	7.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	50.1	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	260	1098	586	307	1786	150	300	160	102	170	531	483
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.91		0.97	0.91		0.97	0.91	1.00	0.97	0.91	
Frt	1.00	0.95		1.00	0.99		1.00	1.00	0.85	1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	4820		3433	5026		3433	5085	1583	3433	4722	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3433	4820		3433	5026		3433	5085	1583	3433	4722	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	289	1220	651	341	1984	167	333	178	113	189	590	537
RTOR Reduction (vph)	0	107	0	0	11	0	0	0	89	0	140	0
Lane Group Flow (vph)	289	1764	0	341	2140	0	333	178	24	189	987	0
Turn Type	Prot			Prot			Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Actuated Green, G (s)	8.5	35.1		10.2	36.8		9.6	19.5	19.5	9.2	19.1	
Effective Green, g (s)	8.5	35.1		10.2	36.8		9.6	19.5	19.5	9.2	19.1	
Actuated g/C Ratio	0.09	0.39		0.11	0.41		0.11	0.22	0.22	0.10	0.21	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	324	1880		389	2055		366	1102	343	351	1002	
v/s Ratio Prot	0.08	0.37		c0.10	c0.43		c0.10	0.04		0.06	c0.21	
v/s Ratio Perm									0.02			
v/c Ratio	0.89	0.94		0.88	1.04		0.91	0.16	0.07	0.54	1.13dr	
Uniform Delay, d1	40.3	26.4		39.3	26.6		39.8	28.6	28.0	38.4	35.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	25.0	9.6		19.3	31.7		25.6	0.1	0.1	1.6	24.6	
Delay (s)	65.3	36.0		58.6	58.3		65.3	28.7	28.1	40.0	59.9	
Level of Service	E	D		E	E		E	C	C	D	E	
Approach Delay (s)		39.9			58.3			48.1			57.0	
Approach LOS		D			E			D			E	

Intersection Summary				
HCM Average Control Delay	51.1	HCM Level of Service	D	
HCM Volume to Capacity ratio	0.96			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	88.3%	ICU Level of Service	E	
Analysis Period (min)	15			

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	210	913	333	289	1531	170	467	200	240	200	310	283
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	0.97	0.91		0.97	0.91		0.97	0.91		1.00	0.95	
Frt	1.00	0.96		1.00	0.98		1.00	0.92		1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	4881		3433	5009		3433	4669		1770	3286	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	4881		3433	5009		3433	4669		1770	3286	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	233	1014	370	321	1701	189	519	222	267	222	344	314
RTOR Reduction (vph)	0	73	0	0	15	0	0	163	0	0	135	0
Lane Group Flow (vph)	233	1311	0	321	1875	0	519	326	0	222	523	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	7.4	30.3		11.1	34.0		15.0	19.1		12.7	16.8	
Effective Green, g (s)	7.4	30.3		11.1	34.0		15.0	19.1		12.7	16.8	
Actuated g/C Ratio	0.08	0.34		0.12	0.38		0.17	0.21		0.14	0.19	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	285	1658		427	1909		577	1000		252	619	
v/s Ratio Prot	0.07	0.27		c0.09	c0.37		c0.15	0.07		0.13	c0.16	
v/s Ratio Perm												
v/c Ratio	0.82	0.79		0.75	0.98		0.90	0.33		0.88	0.85	
Uniform Delay, d1	40.2	26.6		37.7	27.3		36.4	29.6		37.5	34.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	16.4	2.7		7.3	16.5		16.8	0.2		28.0	10.3	
Delay (s)	56.7	29.3		45.0	43.8		53.1	29.8		65.5	45.2	
Level of Service	E	C		D	D		D	C		E	D	
Approach Delay (s)		33.2			44.0			41.8			50.4	
Approach LOS		C			D			D			D	

Intersection Summary				
HCM Average Control Delay	41.5	HCM Level of Service	D	
HCM Volume to Capacity ratio	0.92			
Actuated Cycle Length (s)	89.2	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	83.7%	ICU Level of Service	E	
Analysis Period (min)	15			

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	212	933	135	81	1522	216	154	156	16	78	62	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.99		1.00	0.89	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	4989		1770	4990		1770	1836		1770	1655	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	4989		1770	4990		1770	1836		1770	1655	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	236	1037	150	90	1691	240	171	173	18	87	69	200
RTOR Reduction (vph)	0	19	0	0	20	0	0	4	0	0	123	0
Lane Group Flow (vph)	236	1168	0	90	1911	0	171	187	0	87	146	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	13.0	40.5		7.5	35.0		9.6	16.5		5.8	12.7	
Effective Green, g (s)	13.0	40.5		7.5	35.0		9.6	16.5		5.8	12.7	
Actuated g/C Ratio	0.15	0.47		0.09	0.41		0.11	0.19		0.07	0.15	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	267	2341		154	2024		197	351		119	244	
v/s Ratio Prot	c0.13	0.23		0.05	c0.38		c0.10	c0.10		0.05	0.09	
v/s Ratio Perm												
v/c Ratio	0.88	0.50		0.58	0.94		0.87	0.53		0.73	0.60	
Uniform Delay, d1	35.9	15.9		37.9	24.7		37.7	31.4		39.5	34.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	27.3	0.2		5.6	9.8		30.7	1.6		20.5	3.9	
Delay (s)	63.2	16.0		43.5	34.5		68.5	33.0		60.0	38.3	
Level of Service	E	B		D	C		E	C		E	D	
Approach Delay (s)		23.9			34.9			49.7			43.6	
Approach LOS		C			C			D			D	

Intersection Summary				
HCM Average Control Delay	33.2	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.85			
Actuated Cycle Length (s)	86.3	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	82.2%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	169	808	35	67	1587	36	62	26	76	69	60	497
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	1.00		1.00	0.89		1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5054		1770	5068		1770	1655		1770	1614	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	5054		1770	5068		1770	1655		1770	1614	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	188	898	39	74	1763	40	69	29	84	77	67	552
RTOR Reduction (vph)	0	5	0	0	3	0	0	64	0	0	191	0
Lane Group Flow (vph)	188	932	0	74	1800	0	69	49	0	77	428	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	9.4	31.4		6.6	28.6		3.6	18.9		6.6	21.9	
Effective Green, g (s)	9.4	31.4		6.6	28.6		3.6	18.9		6.6	21.9	
Actuated g/C Ratio	0.12	0.39		0.08	0.36		0.05	0.24		0.08	0.28	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	209	1996		147	1823		80	393		147	445	
v/s Ratio Prot	c0.11	c0.18		0.04	c0.36		c0.04	0.03		0.04	c0.27	
v/s Ratio Perm												
v/c Ratio	0.90	0.47		0.50	0.99		0.86	0.12		0.52	0.96	
Uniform Delay, d1	34.6	17.8		34.9	25.3		37.7	23.8		34.9	28.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	35.6	0.2		2.7	18.0		57.0	0.1		3.3	33.0	
Delay (s)	70.1	18.0		37.6	43.3		94.7	23.9		38.3	61.4	
Level of Service	E	B		D	D		F	C		D	E	
Approach Delay (s)		26.7			43.1			50.8			58.8	
Approach LOS		C			D			D			E	

Intersection Summary				
HCM Average Control Delay	41.5	HCM Level of Service	D	
HCM Volume to Capacity ratio	1.01			
Actuated Cycle Length (s)	79.5	Sum of lost time (s)	20.0	
Intersection Capacity Utilization	91.4%	ICU Level of Service	F	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	912	214	661	1421	379	548
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.91		1.00	0.91	0.97	1.00
Frt	0.97		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	4940		1770	5085	3433	1583
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	4940		1770	5085	3433	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1013	238	734	1579	421	609
RTOR Reduction (vph)	43	0	0	0	0	502
Lane Group Flow (vph)	1208	0	734	1579	421	107
Turn Type			Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases						2
Actuated Green, G (s)	22.7		37.7	64.4	15.4	15.4
Effective Green, g (s)	22.7		37.7	64.4	15.4	15.4
Actuated g/C Ratio	0.26		0.43	0.73	0.18	0.18
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1277		760	3730	602	278
v/s Ratio Prot	c0.24		c0.41	0.31	c0.12	
v/s Ratio Perm						0.07
v/c Ratio	0.95		0.97	0.42	0.70	0.38
Uniform Delay, d1	31.9		24.4	4.5	34.0	32.0
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	14.1		24.3	0.1	3.6	0.9
Delay (s)	46.1		48.7	4.6	37.6	32.9
Level of Service	D		D	A	D	C
Approach Delay (s)	46.1			18.6	34.8	
Approach LOS	D			B	C	

Intersection Summary				
HCM Average Control Delay	29.7	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.91			
Actuated Cycle Length (s)	87.8	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	79.8%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	73	15	15	114	32	130	160	404	101	180	1015	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95			1.00	1.00	0.97	0.91		0.97	0.91	
Frt	1.00	0.96			1.00	0.85	1.00	0.97		1.00	0.99	
Flt Protected	0.95	0.98			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1681	1657			1793	1583	3433	4933		3433	5040	
Flt Permitted	0.95	0.98			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1681	1657			1793	1583	3433	4933		3433	5040	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	81	17	17	127	36	144	178	449	112	200	1128	71
RTOR Reduction (vph)	0	15	0	0	0	97	0	51	0	0	8	0
Lane Group Flow (vph)	58	42	0	0	163	47	178	510	0	200	1191	0
Turn Type	Split			Split		custom	Prot			Prot		
Protected Phases	2	2		6	6		3	8		7	4	
Permitted Phases						8						
Actuated Green, G (s)	5.8	5.8			8.3	18.0	5.7	18.0		7.2	19.5	
Effective Green, g (s)	5.8	5.8			8.3	18.0	5.7	18.0		7.2	19.5	
Actuated g/C Ratio	0.10	0.10			0.15	0.33	0.10	0.33		0.13	0.35	
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	176	174			269	515	354	1606		447	1777	
v/s Ratio Prot	c0.03	0.03			c0.09		0.05	0.10		c0.06	c0.24	
v/s Ratio Perm						0.03						
v/c Ratio	0.33	0.24			0.61	0.09	0.50	0.32		0.45	0.67	
Uniform Delay, d1	22.9	22.7			22.0	13.0	23.5	14.0		22.2	15.2	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.1	0.7			3.8	0.1	1.1	0.1		0.7	1.0	
Delay (s)	24.0	23.4			25.8	13.0	24.6	14.1		22.9	16.2	
Level of Service	C	C			C	B	C	B		C	B	
Approach Delay (s)		23.7			19.8			16.7			17.1	
Approach LOS		C			B			B			B	

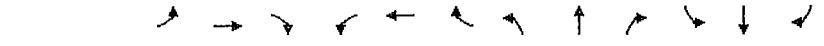
Intersection Summary				
HCM Average Control Delay	17.6	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.54			
Actuated Cycle Length (s)	55.3	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	50.3%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	191	100	130	60	210	200	150	585	20	100	489	185
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.93		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1726		1770	3522		1770	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	1863	1583	1770	1726		1770	3522		1770	3539	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	212	111	144	67	233	222	167	650	22	111	543	206
RTOR Reduction (vph)	0	0	89	0	41	0	0	3	0	0	0	162
Lane Group Flow (vph)	212	111	55	67	414	0	167	669	0	111	543	44
Turn Type	Prot		Perm	Prot			Prot			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									6
Actuated Green, G (s)	13.4	28.6	28.6	5.6	20.8		9.0	18.9		6.4	16.3	16.3
Effective Green, g (s)	13.4	28.6	28.6	5.6	20.8		9.0	18.9		6.4	16.3	16.3
Actuated g/C Ratio	0.18	0.38	0.38	0.07	0.28		0.12	0.25		0.08	0.22	0.22
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	314	706	600	131	476		211	882		150	764	342
v/s Ratio Prot	c0.12	0.06		0.04	c0.24		c0.09	c0.19		0.06	0.15	
v/s Ratio Perm			0.03									0.03
v/c Ratio	0.68	0.16	0.09	0.51	0.87		0.79	0.76		0.74	0.71	0.13
Uniform Delay, d1	29.0	15.5	15.1	33.6	26.1		32.3	26.2		33.7	27.4	23.9
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	5.6	0.1	0.1	3.3	15.4		18.1	3.8		17.7	3.1	0.2
Delay (s)	34.7	15.6	15.2	37.0	41.5		50.4	30.0		51.4	30.5	24.1
Level of Service	C	B	B	D	D		D	C		D	C	C
Approach Delay (s)		24.1			40.9			34.0			31.7	
Approach LOS		C			D			C			C	

Intersection Summary				
HCM Average Control Delay	32.9	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.80			
Actuated Cycle Length (s)	75.5	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	69.5%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

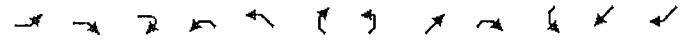
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	100	75	10	240	60	163	110	599	110	170	864	200
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.91		1.00	0.91	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1830		1770	1863	1583	1770	4967		1770	4942	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1830		1770	1863	1583	1770	4967		1770	4942	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	111	83	11	267	67	181	122	666	122	189	960	222
RTOR Reduction (vph)	0	8	0	0	0	145	0	36	0	0	51	0
Lane Group Flow (vph)	111	86	0	267	67	36	122	752	0	189	1131	0
Turn Type	Prot			Prot		Perm	Prot			Prot		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases						2						
Actuated Green, G (s)	6.9	6.8		11.8	11.7	11.7	6.1	15.8		8.7	18.4	
Effective Green, g (s)	6.9	6.8		11.8	11.7	11.7	6.1	15.8		8.7	18.4	
Actuated g/C Ratio	0.12	0.12		0.20	0.20	0.20	0.10	0.27		0.15	0.31	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	207	211		353	369	313	183	1328		261	1539	
v/s Ratio Prot	0.06	c0.05		c0.15	0.04		0.07	0.15		c0.11	c0.23	
v/s Ratio Perm						0.02						
v/c Ratio	0.54	0.41		0.76	0.18	0.11	0.67	0.57		0.72	0.73	
Uniform Delay, d1	24.6	24.3		22.3	19.7	19.4	25.5	18.7		24.1	18.2	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.7	1.3		8.9	0.2	0.2	8.8	0.6		9.5	1.9	
Delay (s)	27.3	25.6		31.2	20.0	19.6	34.4	19.2		33.6	20.0	
Level of Service	C	C		C	B	B	C	B		C	C	
Approach Delay (s)		26.5			25.7			21.3			21.9	
Approach LOS		C			C			C			C	

Intersection Summary				
HCM Average Control Delay	22.7	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.71			
Actuated Cycle Length (s)	59.1	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	57.2%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	284	122	89	43	296	26	274	389	29	68	306	404
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85		0.99		1.00	0.99		1.00	0.91	
Flt Protected	0.95	1.00	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583		1834		1770	3503		1770	3237	
Flt Permitted	0.95	1.00	1.00		0.95		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1583		1748		1770	3503		1770	3237	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	316	136	99	48	329	29	304	432	32	76	340	449
RTOR Reduction (vph)	0	0	51	0	3	0	0	6	0	0	263	0
Lane Group Flow (vph)	316	136	48	0	403	0	304	458	0	76	526	0
Turn Type	Prot		Perm	Perm			Prot			Prot		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases			4	8								
Actuated Green, G (s)	17.6	43.0	43.0		21.4		16.7	27.3		7.0	17.6	
Effective Green, g (s)	17.6	43.0	43.0		21.4		16.7	27.3		7.0	17.6	
Actuated g/C Ratio	0.20	0.48	0.48		0.24		0.19	0.31		0.08	0.20	
Clearance Time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	349	897	762		419		331	1071		139	638	
v/s Ratio Prot	c0.18	0.07					c0.17	0.13		0.04	c0.16	
v/s Ratio Perm			0.03		c0.23							
v/c Ratio	0.91	0.15	0.06		0.96		0.92	0.43		0.55	0.83	
Uniform Delay, d1	35.0	12.9	12.4		33.5		35.6	24.8		39.6	34.4	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	25.8	0.1	0.0		34.0		29.2	0.3		4.3	8.6	
Delay (s)	60.9	13.0	12.4		67.5		64.8	25.0		44.0	42.9	
Level of Service	E	B	B		E		E	C		D	D	
Approach Delay (s)		40.3			67.5			40.8			43.0	
Approach LOS		D			E			D			D	

Intersection Summary				
HCM Average Control Delay	45.6	HCM Level of Service	D	
HCM Volume to Capacity ratio	0.91			
Actuated Cycle Length (s)	89.3	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	85.2%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	EBL	EBR	EBR2	NWL2	NWL	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	40	120	253	100	230	143	269	636	90	130	994	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.97		0.97	0.91		1.00	0.91	
Frt	1.00	0.85	0.85	1.00	0.94		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1583	1583	1770	3304		3433	4991		1770	5009	
Flt Permitted	0.95	1.00	1.00	0.95	0.97		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1583	1583	1770	3304		3433	4991		1770	5009	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	44	133	281	111	256	159	299	707	100	144	1104	122
RTOR Reduction (vph)	0	0	230	0	145	0	0	26	0	0	19	0
Lane Group Flow (vph)	44	133	51	111	270	0	299	781	0	144	1207	0
Turn Type		Perm	Perm	Split			Prot			Prot		
Protected Phases	2			6	6		3	8		7	4	
Permitted Phases		2	2									
Actuated Green, G (s)	10.0	10.0	10.0	5.0	5.0		7.0	17.1		7.0	17.1	
Effective Green, g (s)	10.0	10.0	10.0	5.0	5.0		7.0	17.1		7.0	17.1	
Actuated g/C Ratio	0.18	0.18	0.18	0.09	0.09		0.13	0.31		0.13	0.31	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	321	287	287	161	300		436	1549		225	1555	
v/s Ratio Prot	0.02			0.06	c0.08		c0.09	0.16		0.08	c0.24	
v/s Ratio Perm		c0.08	0.03									
v/c Ratio	0.14	0.46	0.18	0.69	0.90		0.69	0.50		0.64	0.78	
Uniform Delay, d1	18.9	20.2	19.1	24.3	24.8		23.0	15.5		22.9	17.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	1.2	0.3	11.6	28.2		4.4	0.3		6.1	2.5	
Delay (s)	19.1	21.3	19.4	35.9	53.0		27.4	15.8		28.9	19.8	
Level of Service	B	C	B	D	D		C	B		C	B	
Approach Delay (s)	19.9				49.4			18.9			20.7	
Approach LOS	B				D			B			C	

Intersection Summary				
HCM Average Control Delay	24.4	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.70			
Actuated Cycle Length (s)	55.1	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	57.1%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	62	7	87	15	31	17	145	36	2	4	19	228
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	69	8	97	17	34	19	161	40	2	4	21	253
Direction, Lane #	SE 1	SE 2	NW 1	NE 1	SW 1							
Volume Total (vph)	77	97	70	203	279							
Volume Left (vph)	69	0	17	161	4							
Volume Right (vph)	0	97	19	2	253							
Hadj (s)	0.48	-0.67	-0.08	0.19	-0.51							
Departure Headway (s)	6.2	5.1	5.3	5.1	4.3							
Degree Utilization, x	0.13	0.14	0.10	0.29	0.33							
Capacity (veh/h)	534	650	599	673	786							
Control Delay (s)	9.0	7.7	9.0	10.1	9.5							
Approach Delay (s)	8.2		9.0	10.1	9.5							
Approach LOS	A		A	B	A							

Intersection Summary				
Delay	9.3			
HCM Level of Service	A			
Intersection Capacity Utilization	45.8%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	52	90	117	201	62	24	30	298	82	15	778	141
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85		0.99		1.00	0.97		1.00	0.98	
Flt Protected		0.98	1.00		0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1829	1583		1779		1770	3425		1770	3458	
Flt Permitted		0.84	1.00		0.70		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1560	1583		1281		1770	3425		1770	3458	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	58	100	130	223	69	27	33	331	91	17	864	157
RTOR Reduction (vph)	0	0	88	0	5	0	0	39	0	0	24	0
Lane Group Flow (vph)	0	158	42	0	314	0	33	383	0	17	997	0
Turn Type	Perm		Perm	Perm			Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)		16.1	16.1		16.1		1.5	21.4		0.7	20.6	
Effective Green, g (s)		16.1	16.1		16.1		1.5	21.4		0.7	20.6	
Actuated g/C Ratio		0.32	0.32		0.32		0.03	0.43		0.01	0.41	
Clearance Time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		500	508		411		53	1460		25	1419	
v/s Ratio Prot							c0.02	0.11		0.01	c0.29	
v/s Ratio Perm		0.10	0.03		c0.24							
v/c Ratio		0.32	0.08		0.76		0.62	0.26		0.68	0.70	
Uniform Delay, d1		12.9	11.9		15.3		24.1	9.3		24.6	12.3	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.4	0.1		8.2		20.6	0.1		56.0	1.6	
Delay (s)		13.3	12.0		23.5		44.7	9.4		80.6	13.9	
Level of Service		B	B		C		D	A		F	B	
Approach Delay (s)		12.7			23.5			12.0			15.0	
Approach LOS		B			C			B			B	

Intersection Summary						
HCM Average Control Delay	15.3	HCM Level of Service		B		
HCM Volume to Capacity ratio	0.72					
Actuated Cycle Length (s)	50.2	Sum of lost time (s)		12.0		
Intersection Capacity Utilization	59.1%	ICU Level of Service		B		
Analysis Period (min)	15					
c Critical Lane Group						

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	661	350	650	650	0	0	0	0	380	3	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95		0.97	0.95					0.95	0.91	0.95
Frt		0.95		1.00	1.00					1.00	0.99	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.96	1.00
Satd. Flow (prot)		3355		3433	3539					1681	1602	1504
Flt Permitted		1.00		0.95	1.00					0.95	0.96	1.00
Satd. Flow (perm)		3355		3433	3539					1681	1602	1504
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	734	389	722	722	0	0	0	0	422	3	167
RTOR Reduction (vph)	0	99	0	0	0	0	0	0	0	0	4	111
Lane Group Flow (vph)	0	1024	0	722	722	0	0	0	0	224	214	39
Turn Type				Prot						Prot		Perm
Protected Phases		4		3	8					1	6	
Permitted Phases												6
Actuated Green, G (s)		23.0		16.7	43.7					18.0	18.0	18.0
Effective Green, g (s)		23.0		16.7	43.7					18.0	18.0	18.0
Actuated g/C Ratio		0.33		0.24	0.63					0.26	0.26	0.26
Clearance Time (s)		4.0		4.0	4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		1107		823	2219					434	414	388
v/s Ratio Prot		c0.31		c0.21	0.20					0.13	c0.13	
v/s Ratio Perm												0.03
v/c Ratio		0.92		0.88	0.33					0.52	0.52	0.10
Uniform Delay, d1		22.5		25.5	6.1					22.1	22.1	19.7
Progression Factor		1.00		1.00	1.00					1.00	1.00	1.00
Incremental Delay, d2		12.7		10.4	0.1					1.0	1.1	0.1
Delay (s)		35.2		35.9	6.2					23.2	23.2	19.8
Level of Service		D		D	A					C	C	B
Approach Delay (s)		35.2			21.1			0.0			22.3	
Approach LOS		D			C			A			C	

Intersection Summary				
HCM Average Control Delay	26.3	HCM Level of Service		C
HCM Volume to Capacity ratio	0.78			
Actuated Cycle Length (s)	69.7	Sum of lost time (s)		12.0
Intersection Capacity Utilization	70.1%	ICU Level of Service		C
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	120	921	0	0	1396	270	250	5	850	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	0.97	0.95			0.95	1.00	0.95	0.91	0.95			
Frt	1.00	1.00			1.00	0.85	1.00	0.86	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (prot)	3433	3539			3539	1583	1681	1454	1504			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	1.00	1.00			
Satd. Flow (perm)	3433	3539			3539	1583	1681	1454	1504			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	133	1023	0	0	1551	300	278	6	944	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	161	0	68	68	0	0	0
Lane Group Flow (vph)	133	1023	0	0	1551	139	250	419	423	0	0	0
Turn Type	Prot					Perm	Prot		Perm			
Protected Phases	7	4			8		5	2				
Permitted Phases						8			2			
Actuated Green, G (s)	4.6	45.6			37.0	37.0	26.4	26.4	26.4			
Effective Green, g (s)	4.6	45.6			37.0	37.0	26.4	26.4	26.4			
Actuated g/C Ratio	0.06	0.57			0.46	0.46	0.33	0.33	0.33			
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0			
Lane Grp Cap (vph)	197	2017			1637	732	555	480	496			
v/s Ratio Prot	c0.04	0.29			c0.44		0.15	c0.29				
v/s Ratio Perm						0.09			0.28			
v/c Ratio	0.68	0.51			0.95	0.19	0.45	0.87	0.85			
Uniform Delay, d1	37.0	10.4			20.6	12.7	21.1	25.2	25.0			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	8.8	0.2			11.9	0.1	0.6	16.0	13.4			
Delay (s)	45.8	10.6			32.5	12.8	21.7	41.2	38.4			
Level of Service	D	B			C	B	C	D	D			
Approach Delay (s)		14.7			29.3			36.1			0.0	
Approach LOS		B			C			D			A	

Intersection Summary				
HCM Average Control Delay	27.3	HCM Level of Service		C
HCM Volume to Capacity ratio	0.90			
Actuated Cycle Length (s)	80.0	Sum of lost time (s)		12.0
Intersection Capacity Utilization	70.1%	ICU Level of Service		C
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	30	50	740	20	182	90	1174	170	165	1119	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.95	0.91	0.95	0.95	0.91	0.95	1.00	0.91		1.00	0.91	
Frt	1.00	0.97	0.85	1.00	0.99	0.85	1.00	0.98		1.00	1.00	
Flt Protected	0.95	0.99	1.00	0.95	0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1681	1629	1504	1681	1611	1504	1770	4989		1770	5066	
Flt Permitted	0.95	0.97	1.00	0.95	0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1681	1583	1504	1681	1611	1504	1770	4989		1770	5066	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	56	33	56	822	22	202	100	1304	189	183	1243	33
RTOR Reduction (vph)	0	6	26	0	3	50	0	29	0	0	4	0
Lane Group Flow (vph)	50	44	19	436	425	132	100	1464	0	183	1272	0
Turn Type	Prot		Perm	Split		Perm	Prot			Prot		
Protected Phases	7	4!		8!	8		5	2!		6!		
Permitted Phases			4			8					6	
Actuated Green, G (s)	2.5	27.0	27.0	20.5	20.5	20.5	3.7	27.7		20.0	20.0	
Effective Green, g (s)	2.5	27.0	27.0	20.5	20.5	20.5	3.7	27.7		20.0	20.0	
Actuated g/C Ratio	0.04	0.43	0.43	0.33	0.33	0.33	0.06	0.44		0.32	0.32	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	67	684	648	550	527	492	104	2204		565	1616	
v/s Ratio Prot	c0.03	0.00		0.26	c0.26		c0.06	0.29		0.10		
v/s Ratio Perm		0.03	0.01			0.09					c0.25	
v/c Ratio	0.75	0.06	0.03	0.79	0.81	0.27	0.96	0.66		0.32	0.79	
Uniform Delay, d1	29.8	10.5	10.3	19.2	19.3	15.6	29.4	13.8		16.2	19.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	35.8	0.0	0.0	7.7	8.8	0.3	75.5	0.8		0.3	2.6	
Delay (s)	65.6	10.5	10.3	26.9	28.1	15.9	104.9	14.6		16.6	22.0	
Level of Service	E	B	B	C	C	B	F	B		B	C	
Approach Delay (s)		29.4			25.5			20.3			21.3	
Approach LOS		C			C			C			C	

Intersection Summary				
HCM Average Control Delay	22.2	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.81			
Actuated Cycle Length (s)	62.7	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	75.1%	ICU Level of Service	D	
Analysis Period (min)	15			

! Phase conflict between lane groups.
c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	640	610	260	400	1128	0	0	995	660
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0	4.0	4.0	4.0	4.0			4.0	4.0
Lane Util. Factor				0.97	0.91	1.00	0.97	0.95			0.86	0.86
Frpb, ped/bikes				1.00	1.00	1.00	1.00	1.00			0.94	0.75
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00			1.00	1.00
Frt				1.00	1.00	0.85	1.00	1.00			0.97	0.85
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				3433	5085	1583	3433	3539			4390	1023
Flt Permitted				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)				3433	5085	1583	3433	3539			4390	1023
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	711	678	289	444	1253	0	0	1106	733
RTOR Reduction (vph)	0	0	0	0	0	56	0	0	0	0	15	15
Lane Group Flow (vph)	0	0	0	711	678	233	444	1253	0	0	1406	403
Conf. Peds. (#/hr)												200
Turn Type				Prot		Perm	Prot					Perm
Protected Phases				3	8		5	2			6	
Permitted Phases						8						6
Actuated Green, G (s)				16.0	16.0	16.0	9.6	40.4			26.8	26.8
Effective Green, g (s)				16.0	16.0	16.0	9.6	40.4			26.8	26.8
Actuated g/C Ratio				0.25	0.25	0.25	0.15	0.63			0.42	0.42
Clearance Time (s)				4.0	4.0	4.0	4.0	4.0			4.0	4.0
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)				853	1263	393	512	2220			1827	426
v/s Ratio Prot				c0.21	0.13		c0.13	0.35			0.32	
v/s Ratio Perm						0.15						c0.39
v/c Ratio				0.83	0.54	0.59	0.87	0.56			0.77	0.95
Uniform Delay, d1				22.9	21.0	21.3	26.8	6.9			16.1	18.1
Progression Factor				1.00	1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2				7.0	0.4	2.4	14.4	0.3			2.0	29.9
Delay (s)				30.0	21.4	23.7	41.1	7.3			18.2	48.0
Level of Service				C	C	C	D	A			B	D
Approach Delay (s)		0.0			25.4			16.1			24.9	
Approach LOS		A			C			B			C	

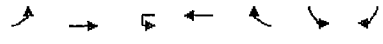
Intersection Summary				
HCM Average Control Delay	22.2	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.90			
Actuated Cycle Length (s)	64.4	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	105.3%	ICU Level of Service	G	
Analysis Period (min)	15			

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	800	930	310	0	0	0	0	531	320	160	1490	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Lane Util. Factor	0.91	0.86	0.91					0.86		1.00	0.91	
Frt	1.00	1.00	0.85					0.94		1.00	1.00	
Flt Protected	0.95	0.99	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	1610	3162	1441					6046		1770	5085	
Flt Permitted	0.95	0.99	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	1610	3162	1441					6046		1770	5085	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	889	1033	344	0	0	0	0	590	356	178	1656	0
RTOR Reduction (vph)	0	2	2	0	0	0	0	61	0	0	0	0
Lane Group Flow (vph)	640	1314	308	0	0	0	0	885	0	178	1656	0
Turn Type	Prot		Perm							Prot		
Protected Phases	7	4						2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	36.0	36.0	36.0					17.7		9.0	30.7	
Effective Green, g (s)	36.0	36.0	36.0					17.7		9.0	30.7	
Actuated g/C Ratio	0.48	0.48	0.48					0.24		0.12	0.41	
Clearance Time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	776	1524	694					1433		213	2090	
v/s Ratio Prot	0.40	c0.42						0.15		0.10	c0.33	
v/s Ratio Perm			0.21									
v/c Ratio	0.82	0.86	0.44					0.62		0.84	0.79	
Uniform Delay, d1	16.6	17.2	12.8					25.5		32.1	19.2	
Progression Factor	1.00	1.00	1.00					1.00		1.00	1.00	
Incremental Delay, d2	7.1	5.3	0.5					0.8		23.7	2.1	
Delay (s)	23.8	22.4	13.2					26.3		55.8	21.4	
Level of Service	C	C	B					C		E	C	
Approach Delay (s)		21.5			0.0			26.3			24.7	
Approach LOS		C			A			C			C	

Intersection Summary				
HCM Average Control Delay	23.6	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.83			
Actuated Cycle Length (s)	74.7	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	105.3%	ICU Level of Service	G	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Volume (vph)	18	239	0	485	27	107	127
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		0.95		1.00	1.00
Frt	1.00	1.00		0.99		1.00	0.85
Flt Protected	0.95	1.00		1.00		0.95	1.00
Satd. Flow (prot)	1770	3539		3511		1770	1583
Flt Permitted	0.95	1.00		1.00		0.95	1.00
Satd. Flow (perm)	1770	3539		3511		1770	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	20	266	0	539	30	119	141
RTOR Reduction (vph)	0	0	0	8	0	0	110
Lane Group Flow (vph)	20	266	0	561	0	119	31
Turn Type	Prot		Prot				Perm
Protected Phases	7	4	3	8		6	
Permitted Phases							6
Actuated Green, G (s)	0.5	12.6		8.1		5.8	5.8
Effective Green, g (s)	0.5	12.6		8.1		5.8	5.8
Actuated g/C Ratio	0.02	0.48		0.31		0.22	0.22
Clearance Time (s)	4.0	4.0		4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0		3.0	3.0
Lane Grp Cap (vph)	34	1689		1077		389	348
v/s Ratio Prot	0.01	c0.08		c0.16		c0.07	
v/s Ratio Perm							0.02
v/c Ratio	0.59	0.16		0.52		0.31	0.09
Uniform Delay, d1	12.8	3.9		7.5		8.6	8.2
Progression Factor	1.00	1.00		1.00		1.00	1.00
Incremental Delay, d2	23.4	0.0		0.5		0.4	0.1
Delay (s)	36.2	3.9		8.0		9.1	8.3
Level of Service	D	A		A		A	A
Approach Delay (s)		6.2		8.0		8.7	
Approach LOS		A		A		A	

Intersection Summary				
HCM Average Control Delay	7.7	HCM Level of Service	A	
HCM Volume to Capacity ratio	0.44			
Actuated Cycle Length (s)	26.4	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	28.8%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBR	EBR2	WBL	WBT	WBR	NBL	NBT	NBR2	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	65	220	180	300	555	95	380	571	354	465	230	395
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.88	1.00	1.00	1.00		1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.85	0.85	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	2787	1583	1770	1822		1770	3539	1583	3433	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	2787	1583	1770	1822		1770	3539	1583	3433	3539	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	72	244	200	333	617	106	422	634	393	517	256	439
RTOR Reduction (vph)	0	0	108	0	6	0	0	0	294	0	0	158
Lane Group Flow (vph)	72	244	92	333	717	0	422	634	99	517	256	281
Turn Type	Prot	custom	custom	Perm			Prot		Perm	Prot		Perm
Protected Phases	7				8		5	2		1	6	
Permitted Phases		4	4	8					2			6
Actuated Green, G (s)	5.4	50.6	50.6	41.2	41.2		26.4	27.4	27.4	19.5	20.5	20.5
Effective Green, g (s)	5.4	50.6	50.6	41.2	41.2		26.4	27.4	27.4	19.5	20.5	20.5
Actuated g/C Ratio	0.05	0.46	0.46	0.38	0.38		0.24	0.25	0.25	0.18	0.19	0.19
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	87	1288	732	666	686		427	886	396	611	663	296
v/s Ratio Prot	c0.04				c0.39		c0.24	0.18		0.15	0.07	
v/s Ratio Perm		0.09	0.06	0.19					0.06			c0.18
v/c Ratio	0.83	0.19	0.13	0.50	1.05		0.99	0.72	0.25	0.85	0.39	0.95
Uniform Delay, d1	51.6	17.4	16.8	26.2	34.2		41.4	37.5	32.8	43.5	39.0	44.0
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	44.8	0.1	0.1	0.6	46.9		40.0	2.8	0.3	10.5	0.4	39.0
Delay (s)	96.4	17.4	16.9	26.8	81.1		81.4	40.3	33.2	54.0	39.4	83.0
Level of Service	F	B	B	C	F		F	D	C	D	D	F
Approach Delay (s)					64.0			50.3			61.4	
Approach LOS					E			D			E	

Intersection Summary				
HCM Average Control Delay	54.2	HCM Level of Service	D	
HCM Volume to Capacity ratio	1.00			
Actuated Cycle Length (s)	109.5	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	90.5%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	750	0	319	0	0	0	0	351	105	250	360	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95	1.00					0.95		0.97	0.95	
Frt	1.00	1.00	0.85					0.97		1.00	1.00	
Flt Protected	0.95	0.95	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	1681	1681	1583					3417		3433	3539	
Flt Permitted	0.95	0.95	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	1681	1681	1583					3417		3433	3539	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	833	0	354	0	0	0	0	390	117	278	400	0
RTOR Reduction (vph)	0	0	209	0	0	0	0	57	0	0	0	0
Lane Group Flow (vph)	416	417	145	0	0	0	0	450	0	278	400	0
Turn Type	Prot		Perm							Prot		
Protected Phases	7	4						2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	20.1	20.1	20.1					12.1		5.0	21.1	
Effective Green, g (s)	20.1	20.1	20.1					12.1		5.0	21.1	
Actuated g/C Ratio	0.41	0.41	0.41					0.25		0.10	0.43	
Clearance Time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	687	687	647					840		349	1518	
v/s Ratio Prot	0.25	c0.25						c0.13		c0.08	0.11	
v/s Ratio Perm			0.09									
v/c Ratio	0.61	0.61	0.22					0.54		0.80	0.26	
Uniform Delay, d1	11.4	11.4	9.5					16.1		21.6	9.0	
Progression Factor	1.00	1.00	1.00					1.00		1.00	1.00	
Incremental Delay, d2	1.5	1.5	0.2					0.7		11.9	0.1	
Delay (s)	12.9	13.0	9.6					16.8		33.5	9.1	
Level of Service	B	B	A					B		C	A	
Approach Delay (s)		12.0			0.0			16.8			19.1	
Approach LOS		B			A			B			B	

Intersection Summary				
HCM Average Control Delay	15.0	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.61			
Actuated Cycle Length (s)	49.2	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	51.0%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	148	502	42	159	347	575	46	110	234	618	157	128
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		0.97	1.00	
Frt	1.00	0.99		1.00	0.91		1.00	0.90		1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3498		1770	3208		1770	1673		3433	1737	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3498		1770	3208		1770	1673		3433	1737	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	164	558	47	177	386	639	51	122	260	687	174	142
RTOR Reduction (vph)	0	9	0	0	405	0	0	102	0	0	37	0
Lane Group Flow (vph)	164	596	0	177	620	0	51	280	0	687	279	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												
Actuated Green, G (s)	8.0	16.3		9.0	17.3		3.7	16.4		16.0	28.7	
Effective Green, g (s)	8.0	16.3		9.0	17.3		3.7	16.4		16.0	28.7	
Actuated g/C Ratio	0.11	0.22		0.12	0.23		0.05	0.22		0.22	0.39	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	192	774		216	753		89	372		745	676	
v/s Ratio Prot	0.09	0.17		c0.10	c0.19		0.03	c0.17		c0.20	0.16	
v/s Ratio Perm												
v/c Ratio	0.85	0.77		0.82	0.82		0.57	0.75		0.92	0.41	
Uniform Delay, d1	32.3	26.9		31.6	26.8		34.2	26.8		28.2	16.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	29.0	4.8		20.9	7.3		8.6	8.4		16.9	0.4	
Delay (s)	61.2	31.7		52.5	34.0		42.9	35.1		45.1	16.8	
Level of Service	E	C		D	C		D	D		D	B	
Approach Delay (s)		38.0			36.7			36.0			36.2	
Approach LOS		D			D			D			D	

Intersection Summary				
HCM Average Control Delay	36.8	HCM Level of Service	D	
HCM Volume to Capacity ratio	0.79			
Actuated Cycle Length (s)	73.7	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	87.4%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	WBL	WBR	SEL	SET	NWT	NWR	NWR2	SWL	SWR
Lane Configurations									
Volume (vph)	0	0	800	594	965	0	430	170	251
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor			0.97	0.95	0.95		1.00	0.97	1.00
Frt			1.00	1.00	1.00		0.85	1.00	0.85
Flt Protected			0.95	1.00	1.00		1.00	0.95	1.00
Satd. Flow (prot)			3433	3539	3539		1583	3433	1583
Flt Permitted			0.95	1.00	1.00		1.00	0.95	1.00
Satd. Flow (perm)			3433	3539	3539		1583	3433	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	889	660	1072	0	478	189	279
RTOR Reduction (vph)	0	0	0	0	0	0	117	0	171
Lane Group Flow (vph)	0	0	889	660	1072	0	361	189	108
Turn Type			Prot				custom		custom
Protected Phases			5	2	6			4	
Permitted Phases							2		6
Actuated Green, G (s)			21.9	53.1	27.2		53.1	9.2	27.2
Effective Green, g (s)			21.9	53.1	27.2		53.1	9.2	27.2
Actuated g/C Ratio			0.31	0.76	0.39		0.76	0.13	0.39
Clearance Time (s)			4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)			3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)			1069	2673	1369		1196	449	612
v/s Ratio Prot			c0.26	0.19	c0.30			c0.06	
v/s Ratio Perm							0.23		0.07
v/c Ratio			0.83	0.25	0.78		0.30	0.42	0.18
Uniform Delay, d1			22.5	2.6	19.0		2.7	28.1	14.2
Progression Factor			1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2			5.6	0.0	3.0		0.1	0.6	0.1
Delay (s)			28.1	2.6	22.0		2.9	28.7	14.3
Level of Service			C	A	C		A	C	B
Approach Delay (s)	0.0			17.3	16.1			20.1	
Approach LOS	A			B	B			C	

Intersection Summary				
HCM Average Control Delay	17.1	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.74			
Actuated Cycle Length (s)	70.3	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	64.3%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL2	EBL	EBR	SEL	SET	SER	NWL	NWT	NWR	SWL	SWR
Lane Configurations											
Volume (vph)	310	0	310	420	320	0	0	1200	250	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	5.0	5.0			5.0	5.0		
Lane Util. Factor	0.95	0.95	1.00	0.97	0.95			0.95	1.00		
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		
Flt Protected	0.95	0.95	1.00	0.95	1.00			1.00	1.00		
Satd. Flow (prot)	1681	1681	1583	3433	3539			3539	1583		
Flt Permitted	0.95	0.95	1.00	0.95	1.00			1.00	1.00		
Satd. Flow (perm)	1681	1681	1583	3433	3539			3539	1583		
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	344	0	344	467	356	0	0	1333	278	0	0
RTOR Reduction (vph)	0	0	280	0	0	0	0	0	155	0	0
Lane Group Flow (vph)	172	172	64	467	356	0	0	1333	123	0	0
Turn Type	Split		Prot	Prot					Prot		
Protected Phases	4	4	4	1	6			2	2		
Permitted Phases											
Actuated Green, G (s)	12.0	12.0	12.0	10.0	43.7			28.7	28.7		
Effective Green, g (s)	12.0	12.0	12.0	10.0	43.7			28.7	28.7		
Actuated g/C Ratio	0.19	0.19	0.19	0.15	0.68			0.44	0.44		
Clearance Time (s)	4.0	4.0	4.0	5.0	5.0			5.0	5.0		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0		
Lane Grp Cap (vph)	312	312	294	531	2390			1570	702		
v/s Ratio Prot	c0.10	0.10	0.04	c0.14	0.10			c0.38	0.08		
v/s Ratio Perm											
v/c Ratio	0.55	0.55	0.22	0.88	0.15			0.85	0.18		
Uniform Delay, d1	23.9	23.9	22.4	26.8	3.8			16.1	10.9		
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00	1.00		
Incremental Delay, d2	2.1	2.1	0.4	15.3	0.0			4.5	0.1		
Delay (s)	26.0	26.0	22.7	42.0	3.8			20.6	11.0		
Level of Service	C	C	C	D	A			C	B		
Approach Delay (s)		24.4			25.5			18.9		0.0	
Approach LOS		C			C			B		A	

Intersection Summary			
HCM Average Control Delay	21.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	64.7	Sum of lost time (s)	14.0
Intersection Capacity Utilization	65.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

ALL-WAY STOP CONTROL ANALYSIS

General Information		Site Information	
Analyst	Jacob Swim	Intersection	Carmel Creek Rd./Del Mar Trail
Agency/Co.	USAI	Jurisdiction	City of San Diego
Date Performed	3/28/2011	Analysis Year	2030
Analysis Time Period	36 Year 2030 + Project AM		

Project ID 002407 - One Paseo

East/West Street: Del Mar Trail | North/South Street: Carmel Creek Road

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	10	10	10	202	2	25
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	3	271	101	15	948	3
%Thrus Left Lane	50			50		

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		LTR		LT	TR	LT	TR
PHF	0.90		0.90		0.90	0.90	0.90	0.90
Flow Rate (veh/h)	33		253		153	263	542	529
% Heavy Vehicles	2		2		2	2	2	2
No. Lanes	1		1		2		2	
Geometry Group	2		2		5		5	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

	Eastbound		Westbound		Northbound		Southbound	
Prop. Left-Turns	0.3		0.9		0.0	0.0	0.0	0.0
Prop. Right-Turns	0.3		0.1		0.0	0.4	0.0	0.0
Prop. Heavy Vehicle	0.0		0.0		0.0	0.0	0.0	0.0
hLT-adj	0.2	0.2	0.2	0.2	0.5	0.5	0.5	0.5
hRT-adj	-0.6	-0.6	-0.6	-0.6	-0.7	-0.7	-0.7	-0.7
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	-0.1		0.1		0.0	-0.3	0.0	0.0

Departure Headway and Service Time

	Eastbound		Westbound		Northbound		Southbound	
hd, initial value (s)	3.20		3.20		3.20	3.20	3.20	3.20
x, initial	0.03		0.22		0.14	0.23	0.48	0.47
hd, final value (s)	7.46		6.82		7.12	6.81	6.31	6.29
x, final value	0.07		0.48		0.30	0.50	0.95	0.92
Move-up time, m (s)	2.0		2.0		2.3		2.3	
Service Time, t_s (s)	5.5		4.8		4.8	4.5	4.0	4.0

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	283		503		403	513	570	572
Delay (s/veh)	11.01		15.95		12.88	16.04	50.94	45.92
LOS	B		C		B	C	F	E
Approach: Delay (s/veh)	11.01		15.95		14.88		48.46	
LOS	B		C		B		E	
Intersection Delay (s/veh)	35.25							
Intersection LOS	E							

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	400	525	243	420	10	637	5	617	20	10	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95		0.95	0.95	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85		0.95	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.95	1.00		0.98	
Satd. Flow (prot)	1770	3539	1583	3433	3527		1681	1687	1583		1728	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.72	0.69	1.00		0.83	
Satd. Flow (perm)	1770	3539	1583	3433	3527		1276	1220	1583		1470	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	11	444	583	270	467	11	708	6	686	22	11	22
RTOR Reduction (vph)	0	0	392	0	2	0	0	0	310	0	15	0
Lane Group Flow (vph)	11	444	191	270	476	0	354	360	376	0	40	0
Turn Type	Prot		Perm	Prot			Perm		Perm	Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases			4				2		2	6		
Actuated Green, G (s)	1.3	18.9	18.9	7.2	24.8		19.5	19.5	19.5		19.5	
Effective Green, g (s)	1.3	18.9	18.9	7.2	24.8		19.5	19.5	19.5		19.5	
Actuated g/C Ratio	0.02	0.33	0.33	0.12	0.43		0.34	0.34	0.34		0.34	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	40	1161	519	429	1519		432	413	536		498	
v/s Ratio Prot	0.01	c0.13		c0.08	0.13							
v/s Ratio Perm			0.12				0.28	c0.30	0.24		0.03	
v/c Ratio	0.28	0.38	0.37	0.63	0.31		0.82	0.87	0.70		0.08	
Uniform Delay, d1	27.7	14.9	14.8	23.9	10.8		17.4	17.9	16.5		13.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	3.7	0.2	0.4	2.9	0.1		11.5	17.9	4.1		0.1	
Delay (s)	31.4	15.1	15.2	26.8	10.9		29.0	35.8	20.7		13.0	
Level of Service	C	B	B	C	B		C	D	C		B	
Approach Delay (s)		15.3			16.7			26.7			13.0	
Approach LOS		B			B			C			B	

Intersection Summary				
HCM Average Control Delay	20.5	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.63			
Actuated Cycle Length (s)	57.6	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	62.6%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Volume (vph)	293	430	0	942	417	370	398
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00		1.00	1.00	1.00	0.95
Frt	1.00	0.85		1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00		1.00	1.00	0.95	1.00
Satd. Flow (prot)	3433	1583		1863	1583	1770	3539
Flt Permitted	0.95	1.00		1.00	1.00	0.95	1.00
Satd. Flow (perm)	3433	1583		1863	1583	1770	3539
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	308	453	0	992	439	389	419
RTOR Reduction (vph)	0	326	0	0	130	0	0
Lane Group Flow (vph)	308	127	0	992	309	389	419
Turn Type		Perm	Prot		Perm	Prot	
Protected Phases	1		3	8		7	
Permitted Phases		1			8		6
Actuated Green, G (s)	16.2	16.2		57.0	57.0	24.0	16.2
Effective Green, g (s)	16.2	16.2		57.0	57.0	24.0	16.2
Actuated g/C Ratio	0.15	0.15		0.52	0.52	0.22	0.15
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	509	235		972	826	389	525
v/s Ratio Prot	0.09			c0.53		c0.22	
v/s Ratio Perm		0.08			0.20		c0.12
v/c Ratio	0.61	0.54		1.02	0.37	1.00	0.80
Uniform Delay, d1	43.5	43.0		26.1	15.5	42.6	44.9
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	2.0	2.4		34.2	0.3	45.6	8.3
Delay (s)	45.5	45.4		60.3	15.8	88.2	53.2
Level of Service	D	D		E	B	F	D
Approach Delay (s)	45.5			46.6			70.1
Approach LOS	D			D			E

Intersection Summary				
HCM Average Control Delay	52.6	HCM Level of Service	D	
HCM Volume to Capacity ratio	0.98			
Actuated Cycle Length (s)	109.2	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	88.4%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Volume (vph)	71	7	0	1011	111	8	580
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0		4.0	4.0
Lane Util. Factor	0.97			0.95		1.00	0.95
Frt	0.99			0.99		1.00	1.00
Flt Protected	0.96			1.00		0.95	1.00
Satd. Flow (prot)	3409			3487		1770	3539
Flt Permitted	0.96			1.00		0.95	1.00
Satd. Flow (perm)	3409			3487		1770	3539
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	79	8	0	1123	123	9	644
RTOR Reduction (vph)	7	0	0	10	0	0	0
Lane Group Flow (vph)	80	0	0	1236	0	9	644
Turn Type			Prot			Prot	
Protected Phases	8		5	2		1	6
Permitted Phases							
Actuated Green, G (s)	3.2			22.0		0.6	26.6
Effective Green, g (s)	3.2			22.0		0.6	26.6
Actuated g/C Ratio	0.08			0.58		0.02	0.70
Clearance Time (s)	4.0			4.0		4.0	4.0
Vehicle Extension (s)	3.0			3.0		3.0	3.0
Lane Grp Cap (vph)	289			2029		28	2490
v/s Ratio Prot	c0.02			c0.35		0.01	c0.18
v/s Ratio Perm							
v/c Ratio	0.28			0.61		0.32	0.26
Uniform Delay, d1	16.2			5.1		18.4	2.0
Progression Factor	1.00			1.00		1.00	1.00
Incremental Delay, d2	0.5			0.5		6.6	0.1
Delay (s)	16.7			5.6		25.0	2.1
Level of Service	B			A		C	A
Approach Delay (s)	16.7			5.6			2.4
Approach LOS	B			A			A

Intersection Summary				
HCM Average Control Delay	5.1	HCM Level of Service	A	
HCM Volume to Capacity ratio	0.57			
Actuated Cycle Length (s)	37.8	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	41.5%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	22	16	29	21	169	26	919	66	89	519	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.94		1.00	0.87		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1743		1770	1614		1770	3504		1770	3512	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1743		1770	1614		1770	3504		1770	3512	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	28	24	18	32	23	188	29	1021	73	99	577	31
RTOR Reduction (vph)	0	16	0	0	168	0	0	6	0	0	4	0
Lane Group Flow (vph)	28	26	0	32	43	0	29	1088	0	99	604	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	1.4	5.5		1.4	5.5		1.6	24.2		3.6	26.2	
Effective Green, g (s)	1.4	5.5		1.4	5.5		1.6	24.2		3.6	26.2	
Actuated g/C Ratio	0.03	0.11		0.03	0.11		0.03	0.48		0.07	0.52	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	49	189		49	175		56	1673		126	1815	
v/s Ratio Prot	0.02	0.01		c0.02	c0.03		0.02	c0.31		c0.06	0.17	
v/s Ratio Perm												
v/c Ratio	0.57	0.14		0.65	0.25		0.52	0.65		0.79	0.33	
Uniform Delay, d1	24.4	20.5		24.4	20.7		24.2	10.0		23.2	7.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	15.1	0.3		27.1	0.7		7.9	0.9		26.7	0.1	
Delay (s)	39.4	20.8		51.5	21.4		32.0	11.0		49.9	7.3	
Level of Service	D	C		D	C		C	B		D	A	
Approach Delay (s)		28.2			25.4			11.5			13.2	
Approach LOS		C			C			B			B	

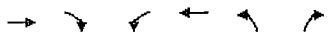
Intersection Summary				
HCM Average Control Delay	14.2	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.59			
Actuated Cycle Length (s)	50.7	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	60.6%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	8	42	36	58	30	21	48	1086	134	23	556	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.94		1.00	0.98		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1748		1770	3481		1770	3530	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1583	1770	1748		1770	3481		1770	3530	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	9	47	40	64	33	23	53	1207	149	26	618	11
RTOR Reduction (vph)	0	0	36	0	20	0	0	10	0	0	1	0
Lane Group Flow (vph)	9	47	4	64	36	0	53	1346	0	26	628	0
Turn Type	Prot		Perm	Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	0.8	4.7	4.7	2.6	6.5		2.9	29.1		1.3	27.5	
Effective Green, g (s)	0.8	4.7	4.7	2.6	6.5		2.9	29.1		1.3	27.5	
Actuated g/C Ratio	0.01	0.09	0.09	0.05	0.12		0.05	0.54		0.02	0.51	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	26	163	139	86	212		96	1886		43	1808	
v/s Ratio Prot	0.01	c0.03		c0.04	0.02		c0.03	c0.39		0.01	0.18	
v/s Ratio Perm			0.00									
v/c Ratio	0.35	0.29	0.03	0.74	0.17		0.55	0.71		0.60	0.35	
Uniform Delay, d1	26.2	22.9	22.4	25.2	21.2		24.8	9.2		25.9	7.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	7.9	1.0	0.1	29.0	0.4		6.7	1.3		21.7	0.1	
Delay (s)	34.0	23.9	22.5	54.2	21.6		31.5	10.5		47.6	7.9	
Level of Service	C	C	C	D	C		C	B		D	A	
Approach Delay (s)		24.3			39.0			11.3			9.5	
Approach LOS		C			D			B			A	

Intersection Summary				
HCM Average Control Delay	12.8	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.61			
Actuated Cycle Length (s)	53.7	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	56.4%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	150	1168	50	182	952	282	90	50	108	488	40	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.95			1.00	1.00	0.95	0.95	
Frt	1.00	0.99		1.00	0.97			1.00	0.85	1.00	0.94	
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00	0.95	0.98	
Satd. Flow (prot)	1770	5054		1770	3418			1805	1583	1681	1620	
Flt Permitted	0.95	1.00		0.95	1.00			0.48	1.00	0.64	0.75	
Satd. Flow (perm)	1770	5054		1770	3418			886	1583	1127	1249	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	167	1298	56	202	1058	313	100	56	120	542	44	156
RTOR Reduction (vph)	0	6	0	0	34	0	0	0	78	0	33	0
Lane Group Flow (vph)	167	1348	0	202	1337	0	0	156	42	374	335	0
Turn Type	Prot			Prot			Perm		Perm	Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2		2	6		
Actuated Green, G (s)	8.6	27.6		12.0	31.0			27.6	27.6	27.6	27.6	
Effective Green, g (s)	8.6	27.6		12.0	31.0			27.6	27.6	27.6	27.6	
Actuated g/C Ratio	0.11	0.35		0.15	0.39			0.35	0.35	0.35	0.35	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	192	1761		268	1338			309	552	393	435	
v/s Ratio Prot	0.09	0.27		c0.11	c0.39							
v/s Ratio Perm								0.18	0.03	c0.33	0.27	
v/c Ratio	0.87	0.77		0.75	1.00			0.50	0.08	0.95	0.77	
Uniform Delay, d1	34.7	22.9		32.2	24.1			20.4	17.3	25.1	23.0	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2	31.6	2.0		11.4	24.2			1.3	0.1	33.0	8.0	
Delay (s)	66.3	25.0		43.6	48.3			21.7	17.3	58.1	31.0	
Level of Service	E	C		D	D			C	B	E	C	
Approach Delay (s)		29.5			47.7			19.8			44.7	
Approach LOS		C			D			B			D	

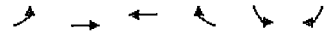
Intersection Summary				
HCM Average Control Delay	38.5	HCM Level of Service	D	
HCM Volume to Capacity ratio	0.97			
Actuated Cycle Length (s)	79.2	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	83.4%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑			↑↑		↱
Volume (veh/h)	1884	80	0	1744	0	128
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	2093	89	0	1938	0	142
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	575			607		
pX, platoon unblocked			0.78		0.82	0.78
vC, conflicting volume			2182		3107	742
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1519		1501	0
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	83
cM capacity (veh/h)			339		92	843

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1
Volume Total	837	837	508	969	969	142
Volume Left	0	0	0	0	0	0
Volume Right	0	0	89	0	0	142
cSH	1700	1700	1700	1700	1700	843
Volume to Capacity	0.49	0.49	0.30	0.57	0.57	0.17
Queue Length 95th (ft)	0	0	0	0	0	15
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	10.1
Lane LOS						B
Approach Delay (s)	0.0			0.0		10.1
Approach LOS						B

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	52.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↰↰↱	↱
Volume (vph)	0	1431	1348	0	934	400
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		0.97	0.91
Frt		1.00	1.00		0.99	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3539	3539		3427	1441
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3539	3539		3427	1441
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	1590	1498	0	1038	444
RTOR Reduction (vph)	0	0	0	0	5	12
Lane Group Flow (vph)	0	1590	1498	0	1077	388
Turn Type						Perm
Protected Phases		4	8		6	
Permitted Phases						6
Actuated Green, G (s)		29.8	29.8		21.3	21.3
Effective Green, g (s)		29.8	29.8		21.3	21.3
Actuated g/C Ratio		0.50	0.50		0.36	0.36
Clearance Time (s)		4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1784	1784		1235	519
v/s Ratio Prot		c0.45	0.42		c0.31	
v/s Ratio Perm						0.27
v/c Ratio		0.89	0.84		0.87	0.75
Uniform Delay, d1		13.2	12.6		17.6	16.6
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		6.1	3.7		7.0	5.9
Delay (s)		19.3	16.3		24.6	22.4
Level of Service		B	B		C	C
Approach Delay (s)		19.3	16.3		24.0	
Approach LOS		B	B		C	

Intersection Summary			
HCM Average Control Delay	19.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	59.1	Sum of lost time (s)	8.0
Intersection Capacity Utilization	149.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	750	1898	0	0	1860	756	630	30	1077	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	0.97	0.95			0.91	1.00	0.95	0.91	0.95			
Frt	1.00	1.00			1.00	0.85	1.00	0.87	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99	1.00			
Satd. Flow (prot)	3433	3539			5085	1583	1681	1473	1504			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99	1.00			
Satd. Flow (perm)	3433	3539			5085	1583	1681	1473	1504			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	833	2109	0	0	2067	840	700	33	1197	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	277	0	4	4	0	0	0
Lane Group Flow (vph)	833	2109	0	0	2067	563	630	650	642	0	0	0
Turn Type	Prot					Perm	Split		Perm			
Protected Phases	7	4			8		2	2				
Permitted Phases						8			2			
Actuated Green, G (s)	26.0	74.0			44.0	44.0	48.0	48.0	48.0			
Effective Green, g (s)	26.0	74.0			44.0	44.0	48.0	48.0	48.0			
Actuated g/C Ratio	0.20	0.57			0.34	0.34	0.37	0.37	0.37			
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0			
Lane Grp Cap (vph)	687	2015			1721	536	621	544	555			
v/s Ratio Prot	c0.24	0.60			c0.41		0.37	c0.44				
v/s Ratio Perm						0.36			0.43			
v/c Ratio	1.21	1.05			1.20	1.05	1.01	1.19	1.16			
Uniform Delay, d1	52.0	28.0			43.0	43.0	41.0	41.0	41.0			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	108.8	33.5			96.3	53.0	39.8	104.4	89.1			
Delay (s)	160.8	61.5			139.3	96.0	80.8	145.4	130.1			
Level of Service	F	E			F	F	F	F	F			
Approach Delay (s)		89.6			126.8			119.2			0.0	
Approach LOS		F			F			F			A	

Intersection Summary				
HCM Average Control Delay	110.9	HCM Level of Service	F	
HCM Volume to Capacity ratio	1.20			
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	107.4%	ICU Level of Service	G	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	250	2712	300	72	1955	202	680	70	188	78	40	200
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0	5.0	4.0	5.0		4.0	5.0		4.0	5.0	5.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		0.97	0.95		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.89		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5014		3433	3153		1770	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5014		3433	3153		1770	1863	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	278	3013	333	80	2172	224	756	78	209	87	44	222
RTOR Reduction (vph)	0	0	68	0	8	0	0	99	0	0	0	164
Lane Group Flow (vph)	278	3013	265	80	2388	0	756	188	0	87	44	58
Turn Type	Prot		Perm	Prot			Prot			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									6
Actuated Green, G (s)	21.0	79.1	79.1	6.0	64.1		29.0	28.0		11.8	10.8	10.8
Effective Green, g (s)	21.0	79.1	79.1	6.0	64.1		29.0	28.0		11.8	10.8	10.8
Actuated g/C Ratio	0.15	0.55	0.55	0.04	0.45		0.20	0.20		0.08	0.08	0.08
Clearance Time (s)	4.0	5.0	5.0	4.0	5.0		4.0	5.0		4.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	260	2815	876	74	2249		697	618		146	141	120
v/s Ratio Prot	c0.16	c0.59		0.05	0.48		c0.22	0.06		0.05	0.02	
v/s Ratio Perm			0.17									c0.04
v/c Ratio	1.07	1.07	0.30	1.08	1.06		1.08	0.30		0.60	0.31	0.49
Uniform Delay, d1	61.0	31.9	17.1	68.4	39.4		57.0	49.1		63.2	62.5	63.4
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	75.4	39.5	0.2	128.5	37.9		59.3	0.3		6.4	1.3	3.1
Delay (s)	136.3	71.4	17.3	197.0	77.3		116.3	49.4		69.6	63.8	66.5
Level of Service	F	E	B	F	E		F	D		E	E	E
Approach Delay (s)		71.4			81.2			97.9			66.9	
Approach LOS		E			F			F			E	

Intersection Summary				
HCM Average Control Delay	78.1	HCM Level of Service	E	
HCM Volume to Capacity ratio	1.00			
Actuated Cycle Length (s)	142.9	Sum of lost time (s)	13.0	
Intersection Capacity Utilization	94.1%	ICU Level of Service	F	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↱	↰	↑↑↑	↰↰	↱
Volume (vph)	2641	227	177	2056	312	242
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	4.0	5.0	4.0	4.0
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	5085	1583	1770	5085	3433	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	5085	1583	1770	5085	3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2871	247	192	2235	339	263
RTOR Reduction (vph)	0	81	0	0	0	152
Lane Group Flow (vph)	2871	166	192	2235	339	111
Turn Type		Prot	Prot			Perm
Protected Phases	4	4	3	8	2	
Permitted Phases						2
Actuated Green, G (s)	51.0	51.0	10.0	65.0	13.5	13.5
Effective Green, g (s)	51.0	51.0	10.0	65.0	13.5	13.5
Actuated g/C Ratio	0.58	0.58	0.11	0.74	0.15	0.15
Clearance Time (s)	5.0	5.0	4.0	5.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2964	923	202	3777	530	244
v/s Ratio Prot	c0.56	0.10	c0.11	0.44	c0.10	
v/s Ratio Perm						0.07
v/c Ratio	0.97	0.18	0.95	0.59	0.64	0.45
Uniform Delay, d1	17.5	8.5	38.5	5.2	34.7	33.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	10.2	0.1	49.1	0.3	2.5	1.3
Delay (s)	27.7	8.6	87.6	5.4	37.3	35.0
Level of Service	C	A	F	A	D	C
Approach Delay (s)	26.2			11.9	36.3	
Approach LOS	C			B	D	

Intersection Summary				
HCM Average Control Delay	21.5	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.91			
Actuated Cycle Length (s)	87.5	Sum of lost time (s)	13.0	
Intersection Capacity Utilization	80.6%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↱	↰↰	↑↑↑	↰↰	↱
Volume (vph)	2694	189	189	1973	260	260
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	4.0	5.0	4.0	4.0
Lane Util. Factor	0.91	1.00	0.97	0.91	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	5085	1583	3433	5085	3433	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	5085	1583	3433	5085	3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2928	205	205	2145	283	283
RTOR Reduction (vph)	0	65	0	0	0	99
Lane Group Flow (vph)	2928	140	205	2145	283	184
Turn Type		Prot	Prot			Perm
Protected Phases	4	4	3	8	2	
Permitted Phases						2
Actuated Green, G (s)	53.1	53.1	6.4	63.5	14.1	14.1
Effective Green, g (s)	53.1	53.1	6.4	63.5	14.1	14.1
Actuated g/C Ratio	0.61	0.61	0.07	0.73	0.16	0.16
Clearance Time (s)	5.0	5.0	4.0	5.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	3118	971	254	3729	559	258
v/s Ratio Prot	c0.58	0.09	c0.06	0.42	0.08	
v/s Ratio Perm						c0.12
v/c Ratio	0.94	0.14	0.81	0.58	0.51	0.71
Uniform Delay, d1	15.3	7.1	39.5	5.3	33.1	34.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	6.4	0.1	16.9	0.2	0.7	9.0
Delay (s)	21.7	7.2	56.4	5.5	33.8	43.4
Level of Service	C	A	E	A	C	D
Approach Delay (s)	20.7			10.0	38.6	
Approach LOS	C			A	D	

Intersection Summary				
HCM Average Control Delay	18.2	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.88			
Actuated Cycle Length (s)	86.6	Sum of lost time (s)	13.0	
Intersection Capacity Utilization	75.7%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	564	1955	622	203	1220	190	653	785	339	190	245	330
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0		4.0	5.0		4.0	5.0	5.0	4.0	5.0	
Lane Util. Factor	0.97	0.91		0.97	0.91		0.97	0.91	1.00	0.97	0.91	
Frt	1.00	0.96		1.00	0.98		1.00	1.00	0.85	1.00	0.91	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	4901		3433	4983		3433	5085	1583	3433	4647	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3433	4901		3433	4983		3433	5085	1583	3433	4647	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	627	2172	691	226	1356	211	726	872	377	211	272	367
RTOR Reduction (vph)	0	38	0	0	14	0	0	0	93	0	163	0
Lane Group Flow (vph)	627	2825	0	226	1553	0	726	872	284	211	476	0
Turn Type	Prot			Prot			Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Actuated Green, G (s)	30.5	75.0		10.0	54.5		30.0	36.5	36.5	10.5	17.0	
Effective Green, g (s)	30.5	75.0		10.0	54.5		30.0	36.5	36.5	10.5	17.0	
Actuated g/C Ratio	0.20	0.50		0.07	0.36		0.20	0.24	0.24	0.07	0.11	
Clearance Time (s)	4.0	5.0		4.0	5.0		4.0	5.0	5.0	4.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	698	2451		229	1810		687	1237	385	240	527	
v/s Ratio Prot	c0.18	c0.58		0.07	0.31		c0.21	0.17		0.06	c0.10	
v/s Ratio Perm									0.18			
v/c Ratio	0.90	1.15		0.99	0.86		1.06	0.70	0.74	0.88	1.07dr	
Uniform Delay, d1	58.2	37.5		69.9	44.2		60.0	51.8	52.3	69.1	65.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	14.3	73.8		55.3	4.3		50.3	1.9	7.2	28.4	18.7	
Delay (s)	72.5	111.3		125.2	48.5		110.3	53.7	59.5	97.5	84.4	
Level of Service	E	F		F	D		F	D	E	F	F	
Approach Delay (s)		104.4			58.1			75.6			87.6	
Approach LOS		F			E			E			F	

Intersection Summary				
HCM Average Control Delay	85.4	HCM Level of Service	F	
HCM Volume to Capacity ratio	1.09			
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	18.0	
Intersection Capacity Utilization	103.2%	ICU Level of Service	G	
Analysis Period (min)	15			

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	209	1760	646	85	829	120	526	300	175	200	250	190
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0		4.0	5.0		4.0	5.0		4.0	5.0	
Lane Util. Factor	0.97	0.91		0.97	0.91		0.97	0.91		1.00	0.95	
Frt	1.00	0.96		1.00	0.98		1.00	0.94		1.00	0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	4881		3433	4989		3433	4805		1770	3310	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	4881		3433	4989		3433	4805		1770	3310	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	220	1853	680	89	873	126	554	316	184	211	263	200
RTOR Reduction (vph)	0	58	0	0	17	0	0	96	0	0	129	0
Lane Group Flow (vph)	220	2475	0	89	982	0	554	404	0	211	334	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	11.2	52.2		3.6	44.6		18.5	17.5		15.7	14.7	
Effective Green, g (s)	11.2	52.2		3.6	44.6		18.5	17.5		15.7	14.7	
Actuated g/C Ratio	0.10	0.49		0.03	0.42		0.17	0.16		0.15	0.14	
Clearance Time (s)	4.0	5.0		4.0	5.0		4.0	5.0		4.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	359	2381		116	2080		594	786		260	455	
v/s Ratio Prot	c0.06	c0.51		0.03	0.20		c0.16	c0.08		0.12	c0.10	
v/s Ratio Perm												
v/c Ratio	0.61	1.04		0.77	0.47		0.93	0.51		0.81	0.74	
Uniform Delay, d1	45.8	27.4		51.3	22.7		43.6	40.9		44.2	44.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	3.1	29.6		25.6	0.2		21.7	0.6		17.2	6.1	
Delay (s)	48.9	57.0		76.9	22.8		65.3	41.4		61.5	50.4	
Level of Service	D	E		E	C		E	D		E	D	
Approach Delay (s)		56.4			27.2			54.0			53.8	
Approach LOS		E			C			D			D	

Intersection Summary				
HCM Average Control Delay	49.9	HCM Level of Service	D	
HCM Volume to Capacity ratio	1.00			
Actuated Cycle Length (s)	107.0	Sum of lost time (s)	23.0	
Intersection Capacity Utilization	94.8%	ICU Level of Service	F	
Analysis Period (min)	15			

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	49	1802	177	8	977	23	102	14	45	39	8	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0		4.0	5.0		4.0	5.0		4.0	5.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	1.00		1.00	0.89		1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5017		1770	5067		1770	1651		1770	1627	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	5017		1770	5067		1770	1651		1770	1627	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	54	2002	197	9	1086	26	113	16	50	43	9	48
RTOR Reduction (vph)	0	12	0	0	3	0	0	44	0	0	45	0
Lane Group Flow (vph)	54	2187	0	9	1109	0	113	22	0	43	12	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	3.3	33.1		0.7	30.5		5.8	7.4		2.2	3.8	
Effective Green, g (s)	3.3	33.1		0.7	30.5		5.8	7.4		2.2	3.8	
Actuated g/C Ratio	0.05	0.54		0.01	0.50		0.09	0.12		0.04	0.06	
Clearance Time (s)	4.0	5.0		4.0	5.0		4.0	5.0		4.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	95	2705		20	2517		167	199		63	101	
v/s Ratio Prot	c0.03	c0.44		0.01	0.22		c0.06	c0.01		0.02	0.01	
v/s Ratio Perm												
v/c Ratio	0.57	0.81		0.45	0.44		0.68	0.11		0.68	0.12	
Uniform Delay, d1	28.4	11.6		30.2	10.0		26.9	24.1		29.3	27.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	7.6	1.9		15.3	0.1		10.4	0.2		26.3	0.5	
Delay (s)	35.9	13.4		45.4	10.1		37.3	24.3		55.6	27.7	
Level of Service	D	B		D	B		D	C		E	C	
Approach Delay (s)		14.0			10.4			32.5			39.7	
Approach LOS		B			B			C			D	

Intersection Summary				
HCM Average Control Delay	14.5	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.72			
Actuated Cycle Length (s)	61.4	Sum of lost time (s)	18.0	
Intersection Capacity Utilization	61.4%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	313	1381	65	22	694	25	56	46	49	33	33	278
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0		4.0	5.0		4.0	5.0		4.0	5.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.92		1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5051		1770	5059		1770	1719		1770	1613	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	5051		1770	5059		1770	1719		1770	1613	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	348	1534	72	24	771	28	62	51	54	37	37	309
RTOR Reduction (vph)	0	6	0	0	5	0	0	45	0	0	262	0
Lane Group Flow (vph)	348	1600	0	24	794	0	62	60	0	37	84	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	14.9	30.6		1.5	17.2		2.4	10.4		1.5	9.5	
Effective Green, g (s)	14.9	30.6		1.5	17.2		2.4	10.4		1.5	9.5	
Actuated g/C Ratio	0.24	0.49		0.02	0.28		0.04	0.17		0.02	0.15	
Clearance Time (s)	4.0	5.0		4.0	5.0		4.0	5.0		4.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	425	2493		43	1403		69	288		43	247	
v/s Ratio Prot	c0.20	c0.32		0.01	0.16		c0.04	0.03		0.02	c0.05	
v/s Ratio Perm												
v/c Ratio	0.82	0.64		0.56	0.57		0.90	0.21		0.86	0.34	
Uniform Delay, d1	22.3	11.6		29.9	19.2		29.7	22.3		30.1	23.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	11.7	0.6		14.8	0.5		73.2	0.4		85.1	0.8	
Delay (s)	33.9	12.2		44.7	19.7		102.8	22.6		115.2	24.3	
Level of Service	C	B		D	B		F	C		F	C	
Approach Delay (s)		16.1			20.5			52.4			33.1	
Approach LOS		B			C			D			C	

Intersection Summary				
HCM Average Control Delay	20.9	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.62			
Actuated Cycle Length (s)	62.0	Sum of lost time (s)	13.0	
Intersection Capacity Utilization	68.7%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1352	301	153	611	170	410
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.91		1.00	0.91	0.97	1.00
Frt	0.97		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	4947		1770	5085	3433	1583
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	4947		1770	5085	3433	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1502	334	170	679	189	456
RTOR Reduction (vph)	55	0	0	0	0	212
Lane Group Flow (vph)	1781	0	170	679	189	244
Turn Type			Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases						2
Actuated Green, G (s)	22.5		7.5	34.0	12.4	12.4
Effective Green, g (s)	22.5		7.5	34.0	12.4	12.4
Actuated g/C Ratio	0.41		0.14	0.62	0.23	0.23
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2046		244	3178	783	361
v/s Ratio Prot	c0.36		c0.10	0.13	0.06	
v/s Ratio Perm						c0.15
v/c Ratio	0.87		0.70	0.21	0.24	0.68
Uniform Delay, d1	14.6		22.4	4.4	17.2	19.2
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	4.4		8.4	0.0	0.2	4.9
Delay (s)	19.0		30.7	4.4	17.3	24.1
Level of Service	B		C	A	B	C
Approach Delay (s)	19.0			9.7	22.1	
Approach LOS	B			A	C	

Intersection Summary			
HCM Average Control Delay	17.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	54.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	64.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	260	52	52	228	38	301	189	1020	168	347	533	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95			1.00	1.00	0.97	0.91		0.97	0.91	
Frt	1.00	0.96			1.00	0.85	1.00	0.98		1.00	0.98	
Flt Protected	0.95	0.98			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1681	1658			1786	1583	3433	4977		3433	4991	
Flt Permitted	0.95	0.98			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1681	1658			1786	1583	3433	4977		3433	4991	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	289	58	58	253	42	334	210	1133	187	386	592	84
RTOR Reduction (vph)	0	17	0	0	0	235	0	25	0	0	20	0
Lane Group Flow (vph)	205	183	0	0	295	99	210	1295	0	386	656	0
Turn Type	Split			Split		custom	Prot			Prot		
Protected Phases	2	2		6	6		3	8		7	4	
Permitted Phases						8						
Actuated Green, G (s)	15.0	15.0			16.8	25.1	9.4	25.1		11.8	27.5	
Effective Green, g (s)	15.0	15.0			16.8	25.1	9.4	25.1		11.8	27.5	
Actuated g/C Ratio	0.18	0.18			0.20	0.30	0.11	0.30		0.14	0.32	
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	298	294			354	469	381	1475		478	1620	
v/s Ratio Prot	c0.12	0.11			c0.17		0.06	c0.26		c0.11	0.13	
v/s Ratio Perm						0.06						
v/c Ratio	0.69	0.62			0.83	0.21	0.55	0.88		0.81	0.41	
Uniform Delay, d1	32.7	32.2			32.6	22.4	35.7	28.3		35.3	22.2	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	6.5	4.0			15.4	0.2	1.7	6.3		9.7	0.2	
Delay (s)	39.1	36.3			48.0	22.6	37.4	34.6		45.0	22.4	
Level of Service	D	D			D	C	D	C		D	C	
Approach Delay (s)		37.7			34.5			35.0			30.6	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM Average Control Delay	33.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	84.7	Sum of lost time (s)	16.0
Intersection Capacity Utilization	64.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	275	130	190	30	80	120	150	701	10	190	639	135
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0	5.0	4.0	5.0		4.0	5.0		4.0	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.91		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1695		1770	3532		1770	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	1863	1583	1770	1695		1770	3532		1770	3539	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	306	144	211	33	89	133	167	779	11	211	710	150
RTOR Reduction (vph)	0	0	141	0	61	0	0	1	0	0	0	108
Lane Group Flow (vph)	306	144	70	33	161	0	167	789	0	211	710	42
Turn Type	Prot		Perm	Prot			Prot			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									6
Actuated Green, G (s)	17.4	28.2	28.2	3.3	14.1		11.1	22.5		12.5	23.9	23.9
Effective Green, g (s)	17.4	28.2	28.2	3.3	14.1		11.1	22.5		12.5	23.9	23.9
Actuated g/C Ratio	0.21	0.33	0.33	0.04	0.17		0.13	0.27		0.15	0.28	0.28
Clearance Time (s)	4.0	5.0	5.0	4.0	5.0		4.0	5.0		4.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	364	622	528	69	283		233	940		262	1001	448
v/s Ratio Prot	c0.17	0.08		0.02	c0.10		0.09	c0.22		c0.12	0.20	
v/s Ratio Perm			0.04									0.03
v/c Ratio	0.84	0.23	0.13	0.48	0.57		0.72	0.84		0.81	0.71	0.09
Uniform Delay, d1	32.2	20.3	19.6	39.8	32.4		35.2	29.3		34.8	27.2	22.3
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	15.9	0.2	0.1	5.1	2.6		10.0	6.7		16.3	2.3	0.1
Delay (s)	48.1	20.5	19.7	44.9	35.0		45.2	36.0		51.1	29.5	22.4
Level of Service	D	C	B	D	D		D	D		D	C	C
Approach Delay (s)		33.0			36.3			37.6			32.8	
Approach LOS		C			D			D			C	

Intersection Summary				
HCM Average Control Delay	34.7	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.78			
Actuated Cycle Length (s)	84.5	Sum of lost time (s)	18.0	
Intersection Capacity Utilization	72.0%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	250	20	15	210	10	140	35	1414	240	189	805	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.91		1.00	0.91	
Frt	1.00	0.93		1.00	1.00	0.85	1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1741		1770	1863	1583	1770	4974		1770	5040	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1741		1770	1863	1583	1770	4974		1770	5040	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	278	22	17	233	11	156	39	1571	267	210	894	56
RTOR Reduction (vph)	0	16	0	0	0	139	0	24	0	0	6	0
Lane Group Flow (vph)	278	23	0	233	11	17	39	1814	0	210	944	0
Turn Type	Prot			Prot		Perm	Prot			Prot		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases						2						
Actuated Green, G (s)	14.0	5.4		17.4	8.8	8.8	4.8	30.7		12.9	38.8	
Effective Green, g (s)	14.0	5.4		17.4	8.8	8.8	4.8	30.7		12.9	38.8	
Actuated g/C Ratio	0.17	0.07		0.21	0.11	0.11	0.06	0.37		0.16	0.47	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	301	114		374	199	169	103	1853		277	2373	
v/s Ratio Prot	c0.16	c0.01		0.13	0.01		0.02	c0.36		c0.12	0.19	
v/s Ratio Perm						c0.01						
v/c Ratio	0.92	0.20		0.62	0.06	0.10	0.38	0.98		0.76	0.40	
Uniform Delay, d1	33.7	36.5		29.5	33.1	33.2	37.4	25.5		33.3	14.2	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	32.4	0.9		3.2	0.1	0.3	2.3	15.9		11.3	0.1	
Delay (s)	66.1	37.3		32.7	33.2	33.5	39.7	41.5		44.5	14.3	
Level of Service	E	D		C	C	C	D	D		D	B	
Approach Delay (s)		62.6			33.0			41.4			19.8	
Approach LOS		E			C			D			B	

Intersection Summary				
HCM Average Control Delay	35.6	HCM Level of Service	D	
HCM Volume to Capacity ratio	0.86			
Actuated Cycle Length (s)	82.4	Sum of lost time (s)	20.0	
Intersection Capacity Utilization	73.7%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	294	244	89	23	101	15	96	373	40	26	361	277
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85		0.99		1.00	0.99		1.00	0.93	
Flt Protected	0.95	1.00	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583		1820		1770	3488		1770	3309	
Flt Permitted	0.95	1.00	1.00		0.89		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1583		1642		1770	3488		1770	3309	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	327	271	99	26	112	17	107	414	44	29	401	308
RTOR Reduction (vph)	0	0	55	0	7	0	0	10	0	0	191	0
Lane Group Flow (vph)	327	271	44	0	148	0	107	448	0	29	518	0
Turn Type	Prot		Perm	Perm			Prot			Prot		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases			4	8								
Actuated Green, G (s)	14.3	27.0	27.0		8.7		5.5	20.9		1.5	16.9	
Effective Green, g (s)	14.3	27.0	27.0		8.7		5.5	20.9		1.5	16.9	
Actuated g/C Ratio	0.23	0.44	0.44		0.14		0.09	0.34		0.02	0.28	
Clearance Time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	412	819	696		233		159	1187		43	911	
v/s Ratio Prot	c0.18	0.15					c0.06	c0.13		0.02	c0.16	
v/s Ratio Perm			0.03		c0.09							
v/c Ratio	0.79	0.33	0.06		0.64		0.67	0.38		0.67	0.57	
Uniform Delay, d1	22.2	11.3	9.9		24.9		27.1	15.3		29.7	19.1	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	10.1	0.2	0.0		5.6		10.7	0.2		34.5	0.8	
Delay (s)	32.3	11.5	9.9		30.4		37.8	15.5		64.2	19.9	
Level of Service	C	B	A		C		D	B		E	B	
Approach Delay (s)		21.0			30.4			19.7			21.7	
Approach LOS		C			C			B			C	

Intersection Summary				
HCM Average Control Delay	21.6	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.70			
Actuated Cycle Length (s)	61.4	Sum of lost time (s)	20.0	
Intersection Capacity Utilization	60.4%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBR	EBR2	NWL2	NWL	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	80	300	490	110	180	180	277	1404	100	199	906	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.97		0.97	0.91		1.00	0.91	
Frt	1.00	0.85	0.85	1.00	0.92		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1583	1583	1770	3261		3433	5035		1770	5045	
Flt Permitted	0.95	1.00	1.00	0.95	0.98		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1583	1583	1770	3261		3433	5035		1770	5045	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	89	333	544	122	200	200	308	1560	111	221	1007	56
RTOR Reduction (vph)	0	0	245	0	181	0	0	10	0	0	7	0
Lane Group Flow (vph)	89	333	299	122	219	0	308	1661	0	221	1056	0
Turn Type		Perm	Perm	Split			Prot			Prot		
Protected Phases	2			6	6		3	8		7	4	
Permitted Phases		2	2									
Actuated Green, G (s)	18.2	18.2	18.2	7.4	7.4		11.4	26.8		11.2	26.6	
Effective Green, g (s)	18.2	18.2	18.2	7.4	7.4		11.4	26.8		11.2	26.6	
Actuated g/C Ratio	0.23	0.23	0.23	0.09	0.09		0.14	0.34		0.14	0.33	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	405	362	362	165	303		492	1695		249	1686	
v/s Ratio Prot	0.05			c0.07	0.07		0.09	c0.33		c0.12	0.21	
v/s Ratio Perm		c0.21	0.19									
v/c Ratio	0.22	0.92	0.83	0.74	0.72		0.63	0.98		0.89	0.63	
Uniform Delay, d1	24.9	30.0	29.2	35.2	35.1		32.1	26.1		33.6	22.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	27.7	14.2	15.9	8.2		2.5	17.1		29.2	0.7	
Delay (s)	25.2	57.6	43.3	51.0	43.3		34.6	43.2		62.8	23.0	
Level of Service	C	E	D	D	D		C	D		E	C	
Approach Delay (s)	46.6				45.1			41.9			29.9	
Approach LOS	D				D			D			C	

Intersection Summary				
HCM Average Control Delay	40.0	HCM Level of Service	D	
HCM Volume to Capacity ratio	0.86			
Actuated Cycle Length (s)	79.6	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	69.0%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	246	30	183	5	13	5	132	28	9	2	8	127
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	273	33	203	6	14	6	147	31	10	2	9	141

Direction, Lane #	SE 1	SE 2	NW 1	NE 1	SW 1
Volume Total (vph)	307	203	26	188	152
Volume Left (vph)	273	0	6	147	2
Volume Right (vph)	0	203	6	10	141
Hadj (s)	0.48	-0.67	-0.05	0.16	-0.52
Departure Headway (s)	5.9	4.8	5.6	5.6	5.0
Degree Utilization, x	0.51	0.27	0.04	0.29	0.21
Capacity (veh/h)	585	724	582	610	669
Control Delay (s)	13.7	8.4	8.8	10.8	9.3
Approach Delay (s)	11.6		8.8	10.8	9.3
Approach LOS	B		A	B	A

Intersection Summary				
Delay	10.9			
HCM Level of Service	B			
Intersection Capacity Utilization	49.6%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	117	50	71	56	26	9	109	765	135	6	376	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85		0.99		1.00	0.98		1.00	0.97	
Flt Protected		0.97	1.00		0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1800	1583		1783		1770	3460		1770	3443	
Flt Permitted		0.97	1.00		0.97		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1800	1583		1783		1770	3460		1770	3443	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	130	56	79	62	29	10	121	850	150	7	418	92
RTOR Reduction (vph)	0	0	67	0	5	0	0	15	0	0	20	0
Lane Group Flow (vph)	0	186	12	0	96	0	121	985	0	7	490	0
Turn Type	Split		Prot	Split			Prot			Prot		
Protected Phases	4	4	4	8	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)		8.8	8.8		6.7		7.0	27.7		0.7	21.4	
Effective Green, g (s)		8.8	8.8		6.7		7.0	27.7		0.7	21.4	
Actuated g/C Ratio		0.15	0.15		0.11		0.12	0.46		0.01	0.36	
Clearance Time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		264	233		199		207	1600		21	1230	
v/s Ratio Prot		c0.10	0.01		c0.05		c0.07	c0.28		0.00	0.14	
v/s Ratio Perm												
v/c Ratio		0.70	0.05		0.48		0.58	0.62		0.33	0.40	
Uniform Delay, d1		24.3	22.0		25.0		25.1	12.1		29.4	14.4	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		8.3	0.1		1.8		4.2	0.7		9.1	0.2	
Delay (s)		32.6	22.0		26.8		29.2	12.8		38.5	14.6	
Level of Service		C	C		C		C	B		D	B	
Approach Delay (s)		29.4			26.8			14.6			15.0	
Approach LOS		C			C			B			B	

Intersection Summary						
HCM Average Control Delay	17.3	HCM Level of Service		B		
HCM Volume to Capacity ratio	0.59					
Actuated Cycle Length (s)	59.9	Sum of lost time (s)		12.0		
Intersection Capacity Utilization	50.5%	ICU Level of Service		A		
Analysis Period (min)	15					
c Critical Lane Group						

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	865	450	650	941	0	0	0	0	350	1	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		4.0	4.0					4.0	5.0	5.0
Lane Util. Factor		0.95		0.97	0.95					0.95	0.91	0.95
Frt		0.95		1.00	1.00					1.00	0.99	0.85
Flt Protected		1.00		0.95	1.00					0.95	0.96	1.00
Satd. Flow (prot)		3358		3433	3539					1681	1598	1504
Flt Permitted		1.00		0.95	1.00					0.95	0.96	1.00
Satd. Flow (perm)		3358		3433	3539					1681	1598	1504
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	961	500	722	1046	0	0	0	0	389	1	200
RTOR Reduction (vph)	0	74	0	0	0	0	0	0	0	0	4	122
Lane Group Flow (vph)	0	1387	0	722	1046	0	0	0	0	206	200	58
Turn Type				Prot						Prot		Prot
Protected Phases		4		3	8					1	6	6
Permitted Phases												
Actuated Green, G (s)		37.0		20.7	62.7					19.0	19.0	18.0
Effective Green, g (s)		37.0		20.7	62.7					19.0	19.0	18.0
Actuated g/C Ratio		0.41		0.23	0.70					0.21	0.21	0.20
Clearance Time (s)		5.0		4.0	4.0					4.0	5.0	5.0
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		1385		792	2474					356	338	302
v/s Ratio Prot		c0.41		c0.21	0.30					0.12	c0.13	0.04
v/s Ratio Perm												
v/c Ratio		1.00		0.91	0.42					0.58	0.59	0.19
Uniform Delay, d1		26.4		33.6	5.8					31.8	31.9	29.8
Progression Factor		1.00		1.00	1.00					1.00	1.00	1.00
Incremental Delay, d2		24.5		14.7	0.1					2.3	2.8	0.3
Delay (s)		50.9		48.3	5.9					34.0	34.6	30.1
Level of Service		D		D	A					C	C	C
Approach Delay (s)		50.9			23.2			0.0			33.0	
Approach LOS		D			C			A			C	

Intersection Summary				
HCM Average Control Delay	35.3	HCM Level of Service		D
HCM Volume to Capacity ratio	0.89			
Actuated Cycle Length (s)	89.7	Sum of lost time (s)		14.0
Intersection Capacity Utilization	80.1%	ICU Level of Service		D
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	130	1114	0	0	695	420	580	10	850	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	0.97	0.95			0.95	1.00	0.95	0.91	0.95			
Frt	1.00	1.00			1.00	0.85	1.00	0.88	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.99	1.00			
Satd. Flow (prot)	3433	3539			3539	1583	1681	1477	1504			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.99	1.00			
Satd. Flow (perm)	3433	3539			3539	1583	1681	1477	1504			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	144	1238	0	0	772	467	644	11	944	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	327	0	12	12	0	0	0
Lane Group Flow (vph)	144	1238	0	0	772	140	554	514	507	0	0	0
Turn Type	Prot					Perm	Prot		Perm			
Protected Phases	7	4			8		5	2				
Permitted Phases						8			2			
Actuated Green, G (s)	3.5	25.4			17.9	17.9	26.5	26.5	26.5			
Effective Green, g (s)	3.5	25.4			17.9	17.9	26.5	26.5	26.5			
Actuated g/C Ratio	0.06	0.42			0.30	0.30	0.44	0.44	0.44			
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0			
Lane Grp Cap (vph)	201	1501			1058	473	744	653	665			
v/s Ratio Prot	0.04	c0.35			0.22		0.33	c0.35				
v/s Ratio Perm						0.09			0.34			
v/c Ratio	0.72	0.82			0.73	0.30	0.74	0.79	0.76			
Uniform Delay, d1	27.7	15.3			18.8	16.1	13.9	14.3	14.1			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	11.5	3.8			2.6	0.4	4.1	6.3	5.2			
Delay (s)	39.2	19.1			21.4	16.5	17.9	20.5	19.2			
Level of Service	D	B			C	B	B	C	B			
Approach Delay (s)		21.2			19.5			19.2			0.0	
Approach LOS		C			B			B			A	

Intersection Summary				
HCM Average Control Delay	20.0	HCM Level of Service		B
HCM Volume to Capacity ratio	0.81			
Actuated Cycle Length (s)	59.9	Sum of lost time (s)		8.0
Intersection Capacity Utilization	80.1%	ICU Level of Service		D
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	110	80	80	520	80	288	110	1206	240	282	1634	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.95	0.91	0.95	0.95	0.91	0.95	1.00	0.91		1.00	0.91	
Frt	1.00	0.99	0.85	1.00	0.99	0.85	1.00	0.98		1.00	0.99	
Flt Protected	0.95	0.99	1.00	0.95	0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1681	1665	1504	1681	1619	1504	1770	4959		1770	5041	
Flt Permitted	0.95	0.90	1.00	0.95	0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1681	1515	1504	1681	1619	1504	1770	4959		1770	5041	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	122	89	89	578	89	320	122	1340	267	313	1816	111
RTOR Reduction (vph)	0	3	51	0	4	42	0	33	0	0	7	0
Lane Group Flow (vph)	109	108	29	347	348	246	122	1574	0	313	1920	0
Turn Type	Prot		Perm	Split		Perm	Prot			Prot		
Protected Phases	7	4!		8!	8		5	2!		6!		
Permitted Phases			4			8					6	
Actuated Green, G (s)	7.1	32.3	32.3	21.2	21.2	21.2	7.6	49.7		38.1	38.1	
Effective Green, g (s)	7.1	32.3	32.3	21.2	21.2	21.2	7.6	49.7		38.1	38.1	
Actuated g/C Ratio	0.08	0.36	0.36	0.24	0.24	0.24	0.08	0.55		0.42	0.42	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	133	556	540	396	381	354	149	2738		749	2134	
v/s Ratio Prot	c0.06	0.02		0.21	c0.22		c0.07	0.32		0.18		
v/s Ratio Perm		0.05	0.02			0.16					c0.38	
v/c Ratio	0.82	0.20	0.05	0.88	0.91	0.69	0.82	0.57		0.42	0.90	
Uniform Delay, d1	40.8	19.9	18.9	33.1	33.5	31.4	40.5	13.2		18.2	24.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	31.0	0.2	0.0	19.0	25.8	5.8	28.2	0.3		0.4	5.5	
Delay (s)	71.8	20.1	18.9	52.1	59.3	37.3	68.7	13.5		18.6	29.7	
Level of Service	E	C	B	D	E	D	E	B		B	C	
Approach Delay (s)		38.5			50.3			17.4			28.2	
Approach LOS		D			D			B			C	

Intersection Summary				
HCM Average Control Delay	29.4	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.89			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	83.0%	ICU Level of Service	E	
Analysis Period (min)	15			

! Phase conflict between lane groups.
c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	220	100	200	500	1290	0	0	1479	545
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0	4.0	4.0	4.0	4.0			4.0	4.0
Lane Util. Factor				0.97	0.91	1.00	0.97	0.95			0.86	0.86
Frpb, ped/bikes				1.00	1.00	1.00	1.00	1.00			0.98	0.69
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00			1.00	1.00
Frt				1.00	1.00	0.85	1.00	1.00			0.99	0.85
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				3433	5085	1583	3433	3539			4669	940
Flt Permitted				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)				3433	5085	1583	3433	3539			4669	940
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	244	111	222	556	1433	0	0	1643	606
RTOR Reduction (vph)	0	0	0	0	0	67	0	0	0	0	7	125
Lane Group Flow (vph)	0	0	0	244	111	155	556	1433	0	0	1745	372
Confl. Peds. (#/hr)												200
Turn Type				Prot		Perm	Prot					Perm
Protected Phases				3	8		5	2			6	
Permitted Phases						8						6
Actuated Green, G (s)				12.8	12.8	12.8	16.4	64.1			43.7	43.7
Effective Green, g (s)				12.8	12.8	12.8	16.4	64.1			43.7	43.7
Actuated g/C Ratio				0.15	0.15	0.15	0.19	0.76			0.51	0.51
Clearance Time (s)				4.0	4.0	4.0	4.0	4.0			4.0	4.0
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)				518	767	239	663	2672			2403	484
v/s Ratio Prot				0.07	0.02		c0.16	0.40			0.37	
v/s Ratio Perm						c0.10						c0.40
v/c Ratio				0.47	0.14	0.65	0.84	0.54			0.73	0.77
Uniform Delay, d1				33.0	31.3	33.9	33.0	4.3			16.0	16.5
Progression Factor				1.00	1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2				0.7	0.1	5.9	9.1	0.2			1.1	7.2
Delay (s)				33.6	31.4	39.9	42.1	4.5			17.1	23.8
Level of Service				C	C	D	D	A			B	C
Approach Delay (s)		0.0			35.6			15.0			18.6	
Approach LOS		A			D			B			B	

Intersection Summary				
HCM Average Control Delay	19.1	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.76			
Actuated Cycle Length (s)	84.9	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	118.6%	ICU Level of Service	H	
Analysis Period (min)	15			

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	740	1207	200	0	0	0	0	945	1000	385	1315	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Lane Util. Factor	0.91	0.86	0.91					0.86		1.00	0.91	
Frt	1.00	1.00	0.85					0.92		1.00	1.00	
Flt Protected	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	1610	3184	1441					5914		1770	5085	
Flt Permitted	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	1610	3184	1441					5914		1770	5085	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	822	1341	222	0	0	0	0	1050	1111	428	1461	0
RTOR Reduction (vph)	0	1	18	0	0	0	0	19	0	0	0	0
Lane Group Flow (vph)	707	1477	182	0	0	0	0	2142	0	428	1461	0
Turn Type	Prot		Perm							Prot		
Protected Phases	7	4						2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	55.0	55.0	55.0					45.0		28.0	77.0	
Effective Green, g (s)	55.0	55.0	55.0					45.0		28.0	77.0	
Actuated g/C Ratio	0.39	0.39	0.39					0.32		0.20	0.55	
Clearance Time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	633	1251	566					1901		354	2797	
v/s Ratio Prot	0.44	c0.46						c0.36		c0.24	0.29	
v/s Ratio Perm			0.13									
v/c Ratio	1.12	1.18	0.32					2.07dr		1.21	0.52	
Uniform Delay, d1	42.5	42.5	29.5					47.5		56.0	19.9	
Progression Factor	1.00	1.00	1.00					1.00		1.00	1.00	
Incremental Delay, d2	72.4	89.9	0.3					64.5		117.6	0.2	
Delay (s)	114.9	132.4	29.9					112.0		173.6	20.1	
Level of Service	F	F	C					F		F	C	
Approach Delay (s)		118.6			0.0			112.0			54.9	
Approach LOS		F			A			F			D	

Intersection Summary				
HCM Average Control Delay	97.7	HCM Level of Service	F	
HCM Volume to Capacity ratio	1.17			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	118.6%	ICU Level of Service	H	
Analysis Period (min)	15			

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group

Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Volume (vph)	75	442	0	410	107	34	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		0.95		1.00	1.00
Frt	1.00	1.00		0.97		1.00	0.85
Flt Protected	0.95	1.00		1.00		0.95	1.00
Satd. Flow (prot)	1770	3539		3429		1770	1583
Flt Permitted	0.95	1.00		1.00		0.95	1.00
Satd. Flow (perm)	1770	3539		3429		1770	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	83	491	0	456	119	38	58
RTOR Reduction (vph)	0	0	0	46	0	0	52
Lane Group Flow (vph)	83	491	0	529	0	38	6
Turn Type	Prot		Prot				Perm
Protected Phases	7	4	3	8		6	
Permitted Phases							6
Actuated Green, G (s)	2.1	15.1		9.0		2.9	2.9
Effective Green, g (s)	2.1	15.1		9.0		2.9	2.9
Actuated g/C Ratio	0.08	0.58		0.35		0.11	0.11
Clearance Time (s)	4.0	4.0		4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0		3.0	3.0
Lane Grp Cap (vph)	143	2055		1187		197	177
v/s Ratio Prot	c0.05	0.14		c0.15		c0.02	
v/s Ratio Perm							0.00
v/c Ratio	0.58	0.24		0.45		0.19	0.04
Uniform Delay, d1	11.5	2.7		6.6		10.5	10.3
Progression Factor	1.00	1.00		1.00		1.00	1.00
Incremental Delay, d2	5.9	0.1		0.3		0.5	0.1
Delay (s)	17.4	2.7		6.8		11.0	10.4
Level of Service	B	A		A		B	B
Approach Delay (s)		4.8		6.8		10.6	
Approach LOS		A		A		B	

Intersection Summary			
HCM Average Control Delay	6.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	26.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	32.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	EBR2	WBL	WBT	WBR	NBL	NBT	NBR2	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	112	300	330	150	273	86	400	1003	340	687	405	227
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.88	1.00	1.00	1.00		1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.85	0.85	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	2787	1583	1770	1796		1770	3539	1583	3433	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	2787	1583	1770	1796		1770	3539	1583	3433	3539	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	124	333	367	167	303	96	444	1114	378	763	450	252
RTOR Reduction (vph)	0	0	305	0	10	0	0	0	155	0	0	180
Lane Group Flow (vph)	124	333	62	167	389	0	444	1114	223	763	450	72
Turn Type	Prot	custom	custom	Prot			Prot		Perm	Prot		Perm
Protected Phases	7			3	8		5	2		1	6	
Permitted Phases		4	4						2			6
Actuated Green, G (s)	8.4	18.5	18.5	13.2	23.3		30.9	37.3	37.3	25.0	31.4	31.4
Effective Green, g (s)	8.4	18.5	18.5	13.2	23.3		30.9	37.3	37.3	25.0	31.4	31.4
Actuated g/C Ratio	0.08	0.17	0.17	0.12	0.21		0.28	0.34	0.34	0.23	0.29	0.29
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	135	469	266	212	380		497	1200	537	780	1010	452
v/s Ratio Prot	0.07			c0.09	c0.22		c0.25	c0.31		c0.22	0.13	
v/s Ratio Perm		0.12	0.04						0.14			0.05
v/c Ratio	0.92	0.71	0.23	0.79	1.02		0.89	0.93	0.41	0.98	0.45	0.16
Uniform Delay, d1	50.5	43.2	39.6	47.0	43.4		38.0	35.1	28.0	42.2	32.2	29.4
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	52.8	5.0	0.4	17.4	52.2		18.1	12.3	0.5	26.6	0.3	0.2
Delay (s)	103.2	48.2	40.1	64.4	95.5		56.1	47.3	28.5	68.8	32.5	29.6
Level of Service	F	D	D	E	F		E	D	C	E	C	C
Approach Delay (s)					86.3			45.7			50.9	
Approach LOS					F			D			D	

Intersection Summary				
HCM Average Control Delay	53.3	HCM Level of Service	D	
HCM Volume to Capacity ratio	0.90			
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	86.5%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1110	0	111	0	0	0	0	105	105	610	110	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95	1.00					0.95		0.97	0.95	
Frt	1.00	1.00	0.85					0.92		1.00	1.00	
Flt Protected	0.95	0.95	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	1681	1681	1583					3274		3433	3539	
Flt Permitted	0.95	0.95	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	1681	1681	1583					3274		3433	3539	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1233	0	123	0	0	0	0	117	117	678	122	0
RTOR Reduction (vph)	0	0	65	0	0	0	0	104	0	0	0	0
Lane Group Flow (vph)	616	617	58	0	0	0	0	130	0	678	122	0
Turn Type	Prot		Perm							Prot		
Protected Phases	7	4						2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	33.1	33.1	33.1					8.1		17.3	29.4	
Effective Green, g (s)	33.1	33.1	33.1					8.1		17.3	29.4	
Actuated g/C Ratio	0.47	0.47	0.47					0.11		0.25	0.42	
Clearance Time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	789	789	743					376		842	1476	
v/s Ratio Prot	0.37	c0.37						c0.04		c0.20	0.03	
v/s Ratio Perm			0.04									
v/c Ratio	0.78	0.78	0.08					0.35		0.81	0.08	
Uniform Delay, d1	15.7	15.7	10.3					28.8		25.0	12.4	
Progression Factor	1.00	1.00	1.00					1.00		1.00	1.00	
Incremental Delay, d2	5.0	5.1	0.0					0.6		5.6	0.0	
Delay (s)	20.7	20.7	10.3					29.3		30.7	12.4	
Level of Service	C	C	B					C		C	B	
Approach Delay (s)		19.8			0.0			29.3			27.9	
Approach LOS		B			A			C			C	

Intersection Summary				
HCM Average Control Delay	23.4	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.73			
Actuated Cycle Length (s)	70.5	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	64.4%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	218	473	51	103	321	687	45	220	103	228	59	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		0.97	1.00	
Frt	1.00	0.99		1.00	0.90		1.00	0.95		1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3487		1770	3178		1770	1774		3433	1740	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3487		1770	3178		1770	1774		3433	1740	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	242	526	57	114	357	763	50	244	114	253	66	52
RTOR Reduction (vph)	0	11	0	0	263	0	0	22	0	0	36	0
Lane Group Flow (vph)	242	572	0	114	857	0	50	336	0	253	82	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												
Actuated Green, G (s)	11.8	27.8		7.7	23.7		3.7	17.4		6.6	20.3	
Effective Green, g (s)	11.8	27.8		7.7	23.7		3.7	17.4		6.6	20.3	
Actuated g/C Ratio	0.16	0.37		0.10	0.31		0.05	0.23		0.09	0.27	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	277	1284		181	998		87	409		300	468	
v/s Ratio Prot	c0.14	0.16		0.06	c0.27		0.03	c0.19		c0.07	c0.05	
v/s Ratio Perm												
v/c Ratio	0.87	0.45		0.63	1.01dr		0.57	0.82		0.84	0.18	
Uniform Delay, d1	31.1	18.0		32.5	24.3		35.1	27.6		33.9	21.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	24.8	0.2		6.7	7.4		8.9	12.4		18.9	0.2	
Delay (s)	55.9	18.3		39.2	31.8		44.0	40.0		52.9	21.4	
Level of Service	E	B		D	C		D	D		D	C	
Approach Delay (s)		29.3			32.4			40.5			42.9	
Approach LOS		C			C			D			D	

Intersection Summary				
HCM Average Control Delay	34.1	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.89			
Actuated Cycle Length (s)	75.5	Sum of lost time (s)	20.0	
Intersection Capacity Utilization	80.8%	ICU Level of Service	D	
Analysis Period (min)	15			

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group

Movement	WBL	WBR	SEL	SET	NWT	NWR	NWR2	SWL	SWR
Lane Configurations									
Volume (vph)	0	0	390	622	810	0	270	150	275
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0	5.0	4.0		4.0	4.0	4.0
Lane Util. Factor			0.97	0.95	0.95		1.00	0.97	1.00
Frt			1.00	1.00	1.00		0.85	1.00	0.85
Flt Protected			0.95	1.00	1.00		1.00	0.95	1.00
Satd. Flow (prot)			3433	3539	3539		1583	3433	1583
Flt Permitted			0.95	1.00	1.00		1.00	0.95	1.00
Satd. Flow (perm)			3433	3539	3539		1583	3433	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	433	691	900	0	300	167	306
RTOR Reduction (vph)	0	0	0	0	0	0	186	0	254
Lane Group Flow (vph)	0	0	433	691	900	0	114	167	52
Turn Type			Prot				Perm		Perm
Protected Phases			5	2	6			4	
Permitted Phases							6		4
Actuated Green, G (s)			10.3	32.2	18.9		18.9	8.5	8.5
Effective Green, g (s)			10.3	32.2	18.9		18.9	8.5	8.5
Actuated g/C Ratio			0.21	0.65	0.38		0.38	0.17	0.17
Clearance Time (s)			4.0	5.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)			3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)			711	2293	1346		602	587	271
v/s Ratio Prot			c0.13	0.20	c0.25			c0.05	
v/s Ratio Perm							0.07		0.03
v/c Ratio			0.61	0.30	0.67		0.19	0.28	0.19
Uniform Delay, d1			17.9	3.8	12.8		10.3	18.0	17.7
Progression Factor			1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2			1.5	0.1	1.3		0.2	0.3	0.3
Delay (s)			19.4	3.9	14.1		10.4	18.2	18.0
Level of Service			B	A	B		B	B	B
Approach Delay (s)	0.0			9.9	13.2			18.1	
Approach LOS	A			A	B			B	

Intersection Summary				
HCM Average Control Delay	12.7	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.57			
Actuated Cycle Length (s)	49.7	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	47.8%	ICU Level of Service	A	
Analysis Period (min)	15			

c Critical Lane Group

Movement	EBL2	EBL	EBR	SEL	SET	SER	NWL	NWT	NWR	SWL	SWR
Lane Configurations											
Volume (vph)	860	0	520	325	360	0	0	540	300	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		
Lane Util. Factor	0.95	0.95	1.00	0.97	0.95			0.95	1.00		
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		
Flt Protected	0.95	0.95	1.00	0.95	1.00			1.00	1.00		
Satd. Flow (prot)	1681	1681	1583	3433	3539			3539	1583		
Flt Permitted	0.95	0.95	1.00	0.95	1.00			1.00	1.00		
Satd. Flow (perm)	1681	1681	1583	3433	3539			3539	1583		
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	956	0	578	361	400	0	0	600	333	0	0
RTOR Reduction (vph)	0	0	241	0	0	0	0	0	245	0	0
Lane Group Flow (vph)	478	478	337	361	400	0	0	600	88	0	0
Turn Type	Prot		Perm	Prot					Perm		
Protected Phases	7	4		1	6			2			
Permitted Phases			4						2		
Actuated Green, G (s)	22.0	22.0	22.0	8.8	28.2			15.4	15.4		
Effective Green, g (s)	22.0	22.0	22.0	8.8	28.2			15.4	15.4		
Actuated g/C Ratio	0.38	0.38	0.38	0.15	0.48			0.26	0.26		
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0		
Lane Grp Cap (vph)	635	635	598	519	1715			936	419		
v/s Ratio Prot	c0.28	0.28		c0.11	0.11			c0.17			
v/s Ratio Perm			0.21						0.06		
v/c Ratio	0.75	0.75	0.56	0.70	0.23			0.64	0.21		
Uniform Delay, d1	15.7	15.7	14.3	23.4	8.7			19.0	16.7		
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00	1.00		
Incremental Delay, d2	5.0	5.0	1.2	4.0	0.1			1.5	0.3		
Delay (s)	20.8	20.8	15.5	27.5	8.8			20.5	16.9		
Level of Service	C	C	B	C	A			C	B		
Approach Delay (s)		18.8			17.6			19.2		0.0	
Approach LOS		B			B			B		A	

Intersection Summary			
HCM Average Control Delay	18.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	58.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	58.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

ALL-WAY STOP CONTROL ANALYSIS

General Information		Site Information	
Analyst	Jacob Swim	Intersection	Carmel Creek Rd./Del Mar Trail
Agency/Co.	USAI	Jurisdiction	City of San Diego
Date Performed	3/28/2011	Analysis Year	2030
Analysis Time Period	36 Year 2030 + Project PM		

Project ID 002407 - One Paseo

East/West Street: Del Mar Trail North/South Street: Carmel Creek Road

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	5	5	4	56	12	10
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	12	778	101	15	445	10
%Thrus Left Lane	50			50		

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		LTR		LT	TR	LT	TR
PHF	0.90		0.90		0.90	0.90	0.90	0.90
Flow Rate (veh/h)	14		86		445	544	262	258
% Heavy Vehicles	2		2		2	2	2	2
No. Lanes	1		1		2		2	
Geometry Group	2		2		5		5	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

	Eastbound		Westbound		Northbound		Southbound	
Prop. Left-Turns	0.4		0.7		0.0	0.0	0.1	0.0
Prop. Right-Turns	0.3		0.1		0.0	0.2	0.0	0.0
Prop. Heavy Vehicle	0.0		0.0		0.0	0.0	0.0	0.0
hLT-adj	0.2	0.2	0.2	0.2	0.5	0.5	0.5	0.5
hRT-adj	-0.6	-0.6	-0.6	-0.6	-0.7	-0.7	-0.7	-0.7
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	-0.1		0.1		0.0	-0.1	0.1	0.0

Departure Headway and Service Time

	Eastbound		Westbound		Northbound		Southbound	
hd, initial value (s)	3.20		3.20		3.20	3.20	3.20	3.20
x, initial	0.01		0.08		0.40	0.48	0.23	0.23
hd, final value (s)	6.77		6.65		5.54	5.38	6.09	6.03
x, final value	0.03		0.16		0.68	0.81	0.44	0.43
Move-up time, m (s)	2.0		2.0		2.3		2.3	
Service Time, t_s (s)	4.8		4.6		3.2	3.1	3.8	3.7

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	264		336		645	666	512	508
Delay (s/veh)	9.95		10.90		19.41	27.17	13.55	13.24
LOS	A		B		C	D	B	B
Approach: Delay (s/veh)	9.95		10.90		23.67		13.40	
LOS	A		B		C		B	
Intersection Delay (s/veh)	19.55							
Intersection LOS	C							

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