

**SECOND REVISED
DRAFT GENERIC ENVIRONMENTAL IMPACT STATEMENT**

FOR THE
WESTWOOD NEIGHBORHOOD
October 2015



Project Site located at
772 North Forest Road, and 385 and 391 Maple Road
Town of Amherst, Erie County, New York

APPENDIX III
Project Environmental Impact
Reports & Studies

LEAD AGENCY:

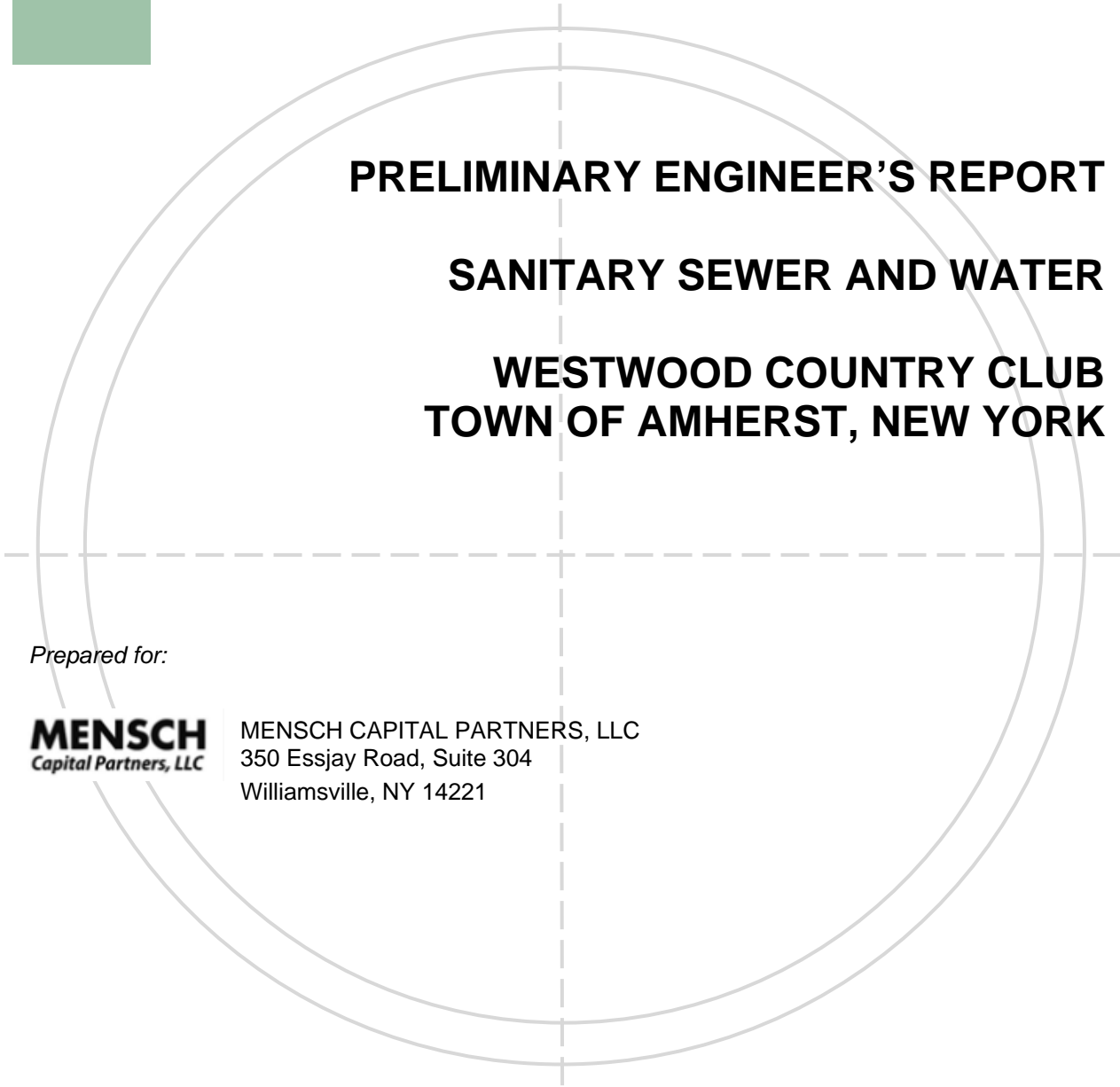
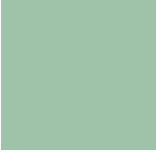



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PRELIMINARY ENGINEER'S REPORT

SANITARY SEWER AND WATER

WESTWOOD COUNTRY CLUB
TOWN OF AMHERST, NEW YORK

Prepared for:

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12J5-0026D



May 2014

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**PRELIMINARY ENGINEER'S REPORT
WESTWOOD COUNTRY CLUB
SANITARY SEWER AND WATER
Mensch Capital Partners, LLC**



1.0 INTRODUCTION

The proposed Westwood Development Project is located in the Town of Amherst, extending between Sheridan Drive and Maple Road, bordered by Frankhauser Road to the west and Ellicott Creek to the east. Access points to the development will be at the north and south, at Maple Road and Sheridan Drive, respectively. See Figure attached.

This report will evaluate the estimated sanitary sewer flow of the proposed development and the corresponding on-site sanitary sewer requirements. A preliminary investigation of the downstream capacity of the receiving sewers will also be evaluated.

2.0 SANITARY SEWER

2.1 Proposed Flows

The proposed development consists of both residential and commercial buildings as presented in the Tables below.

Future Residential Development:

		<i>Future Residential Development</i>						Total
		<i>Apartments</i>	<i>Single Family Homes</i>	<i>Patio Homes</i>	<i>Townhomes</i>	<i>Apartments</i>	<i>Community Building</i>	
Equivalent Dwelling Units	<i>Residential</i>	352	46	108	127	56	2	691
	Total:	352	46	108	127	56	2	691
Ultimate Service	<i>Occupancy Rate</i>	2	3.5	3.5	2	2	1.5	
	<i>Peaking Factor</i>	4.00	4.18	4.03	4.11	4.23	4.45	
	<i>Average Daily Sewer Flow (ADSF) (gpd)</i>	70,400	16,100	37,800	25,400	11,200	300	161,200
	<i>Maximum Daily Flow (Assumes a peaking factor of 2.0)</i>	140,800	32,200	75,600	50,800	22,400	600	322,400
	<i>Peak Hour Sewer Flow (PHSF) (gpm)</i>	281,600	67,313	152,474	104,352	47,374	1,336	654,448

Note: Flow production (including infiltration) = 100 gpcd (10 States Standards)

2.2 Future Commercial Development

<u>Commercial:</u>				
Use Component	Units		Average Daily Flow (gpd)	Total Flow (gpd)
Hotel	130	(Rooms)	120	15,600
Retail/Shopping	115,000	(Sqft)	0.1	11,500
Office	200,000	(Sqft)	0.1	20,000
Senior Living	296	residents	125	37,000
Sub Total - Commercial				84,100
Max Daily Flow (Assumes a peaking factor of 2.0)				168,200
Peak Hourly Flow (Assume peaking factor of 4.1)				344,900

The total flows, from both the residential and commercial sections of the proposed development, are presented below.

2.3 Total Proposed Flows

	Residential Flows (gpd)	Commercial Flow (gpd)	Total Flow (gpd)
Average Daily Flow	161,200	84,100	245,300
Maximum Daily Flow	322,400	168,200	490,600
Peak Hourly Flow	654,500	344,900	999,400

2.4 Additional Flows

The Town currently has sewer flow issues in the neighborhood to the northwest of the proposed development during wet weather events. These issues include sanitary and storm sewer surcharges, basement flooding, and street flooding. It is proposed that a wet weather relief pump station be installed at the north end of the proposed Westwood Development (near Maple Road), to alleviate some of these sanitary sewer flow issues. The excess flow will be pumped to the proposed sanitary sewer and then flow by gravity through the proposed development to the existing 36-inch sewer on Sheridan. The pump station will only start when there is excess flow during wet weather events.

It is proposed that a 15-inch sewer be installed to convey both the proposed development wastewater flows and the proposed wet weather relief pump station flows to the existing sewer on Sheridan Drive (details in following section). The full flow capacity of the 15-inch line is 1.62 mgd, and the expected maximum daily flows from the proposed development are approximately 0.49 mgd. Therefore, the 15-inch line can handle an additional 1.13 mgd. To prevent potential sewer backups and surcharging, the pump station will be designed so that the total flow (including Westwood Development flows) is slightly less than the maximum capacity of the proposed sewer (see chart below). Therefore, it is anticipated that a relief pump station with a maximum design capacity of 1.00 mgd (1,000,000 gpd) will be constructed.

2.5 Total Proposed Flows

	Residential Flows (gpd)	Commercial Flow (gpd)	Relief Pump Station (gpd)	Total Flow (gpd)
Average Daily Flow	161,200	84,100	N/A	245,300
Maximum Daily Flow	322,400	168,200	1,000,000	1,490,600
Peak Hourly Flow	654,500	344,900	120,000	1,119,400

2.6 Proposed Sanitary Sewer Design

The proposed sanitary sewer will be designed to carry the maximum daily flow of 1,490,600 gpd. A 15-inch gravity sewer at a 0.15% slope and a roughness coefficient of 0.013 will allow for a full flow capacity of 1,620,000 gpd, which is sufficient for the proposed peak hourly flow. See FlowMaster Calculation No. 1 for more details. It is proposed that approximately 4,700 linear feet of sanitary sewer, starting at the north end of the Westwood Development, near Maple Road, will convey flow south through the development to the existing 36-inch sanitary sewer on Sheridan Drive (Town of Amherst). The starting invert elevation of the sanitary sewer at Maple Road will be approximately 590' (8-foot depth), and end at Sheridan Road at an elevation of 582.5' (20-foot depth).

The proposed 15-inch sewer will connect to an existing drop manhole on Sheridan Drive, at Fenwick Drive. The existing manhole is approximately 22 feet deep and has one (1) 12-inch connection and two (2) 36-inch connections. The bottom of the existing manhole is a 6' x 6' concrete chamber with an invert elevation of 581.19 feet.

The entire Westwood Development can be served with gravity sewers. The residential and commercial areas tributary to the 15-inch sanitary sewer will be serviced by 8 and 10-inch sewers.

Depending on the final layout and depth of the sanitary sewer, it may be necessary to use fill to raise the grades in the northern portion (residential section) of the development to ensure proper minimum cover.

2.7 Receiving Sewer Capacities

The receiving 36-inch sewer on Sheridan Drive has a design capacity of 17.2 mgd (See FlowMaster Calculation Sheet No. 2). The average and maximum daily flows in the 36-inch sewer are estimated by Town personnel to be well below the design capacity, but no flow data is available. According to Town personnel, the 36-inch sewer has capacity to handle the proposed additional flow during average daily flows. However, flow metering and sewer modeling will be required to adequately determine the sewer capacity.

The 36-inch sewer flows to a 54-inch sewer approximately 4000-feet downstream of the proposed connection point. The capacity of the 54-inch sewer is 36.4 mgd (See FlowMaster Calculation Sheet No. 3). According to Town flow meter data, the average and maximum daily flows in the 54-inch sewer are 8.05 mgd and 9.55 mgd, respectively. It is our understanding that the 54-inch sewer becomes surcharged during storm events due to I/I issues in the Town. However, flow monitoring and sewer modeling will need to be completed for a full evaluation of sewer capacity.

3.0 WATER

3.1 Source of Supply

The Erie County Water Authority (ECWA) currently supplies water to the Town of Amherst under the terms of a Lease Management Agreement. The ECWA would also operate and maintain the new Westwood Development waterlines under the terms of the Lease Management Agreement. The available water source for the proposed multi-use development is an 8-inch diameter (D.I.P.) water main located on the south side of Maple Road and a 16-inch diameter (D.I.P.) on Sheridan Drive. Each of these water mains would be tapped and interconnected through the proposed multiuse development. The proposed water mains will be constructed in accordance ECWA standards and turned over to the ECWA for operation and maintenance. All commercial services will be isolated from the supply by a Reduced Pressure Zone Backflow Preventer (RPZBP).

3.2 Pipe Design

There will be approximately 20,158 lineal feet of proposed water mains for the new development. The water mains will be 8 and 10-inch diameter (C-900 PVC and Class 52 Ductile Iron) waterline, including the appropriate number of hydrant assemblies, and appurtenant facilities for proper operation and isolation for maintenance purposes

3.2.1 General

Town of Amherst and ECWA specifications will be followed during construction of the water distribution improvements. Valves and hydrants will be provided at locations in accordance with Recommended Standards for Water Works.

3.2.1.1 Thrust Restraint

Thrust restraint calculations will be based on a test pressure of 175 psi, where the following conditions exist:

- For all horizontal and vertical bends equal to or greater than $11\frac{1}{4}^\circ$
- At dead ends
- At tees
- At all valves, in both directions (assumed fully closed).

3.2.1.2 Trenching, Bedding and Backfill Material

The centerline of the water main will be located within the right-of-way, in a suitable location for construction. The new waterline will be placed in a separate trench a minimum of ten (10) feet from sewer alignments.

The depth of cover over the 8 and 10-inch pipe will be a minimum of 5 feet. The pipe will be bedded on 6-inches of #1 Crushed Stone, and filled to 12-inches above the top of the pipe. Where the waterline is within the pavement, five (5) feet of pavement edge, or driveways, compacted NYSDOT #2 crushed stone will be required to backfill the trench for full depth.

3.2.1.3 Linings and Coatings

Cement mortar lining, as specified in AWWA C104, is required for the ductile iron pipe. Asphaltic coating is required on the outside of the pipe.

3.2.1.4 Pressure and Leakage Testing

Pressure and leakage testing will be performed in accordance with AWWA standards and the ECWA's standard specifications, at a test pressure of 175 psi.

3.2.1.5 Disinfection

Disinfection will be performed in accordance with NYSDOH and AWWA standards. Sampling points will be located at the beginning and end of each pipe section, and at intervals not exceeding 1000 feet.

Fire protection will be provided by proposed hydrant assemblies located along the proposed roads for the residential areas and at each commercial building as required by New York State Building Code and New York State Health Department.

3.3 System Design

The ECWA conducted hydrant flow tests on April 24, 2014 (Refer to data in Appendix A). The representative static gauge pressures at the proposed points of connection are estimated to be approximately 92 and 84 psi.

Referring to the ECWA test:

- Centerline elevation of the pressure hydrant gauge is approximated to be 598.0± feet for the Maple Road hydrant flow test. Ground elevation at the point of connection to the proposed works is approximated to be 596.5± feet. ECWA reported a measured hydrant flow of 2,326 gpm and a residual pressure of 78 psi.
- Centerline elevation of the pressure hydrant gauge is approximated to be 605.0± feet for the Sheridan Drive hydrant flow test. Ground elevation at the point of connection to the proposed works is approximated to be 603.5± feet. ECWA reported a measured hydrant flow of 2,372 gpm and a residual pressure of 72 psi.
- Calculated supply available at a 20 psi residual pressure. According to ECWA, a calculated 5,632 gpm± is available at the Maple Road test hydrant located approximately 451± lf from the point of connection, and a calculated 5,875± gpm is available at the Sheridan Drive test hydrant located approximately 950± lf from the point of connection.

As it pertains to the hydraulic model, hydrant test data was translated to the location of the proposed inter-connection. The three (3) operating points listed below for each specified hydrant test were input as respective pump curves to establish the apparent performance related characteristics of the supply.

Test No.1 Maple Rd. location

<u>Demand</u>	<u>Pressure/Head</u>
0 gpm	92 psi / 212.52' of H ₂ O
2,326 gpm	78 psi / 180.18' of H ₂ O
5,632 gpm	20 psi / 46.20' of H ₂ O

Test No.2 Sheridan Dr at North Forest Rd. location

<u>Demand</u>	<u>Pressure/Head</u>
0 gpm	84 psi / 194.04' of H ₂ O
2,372 gpm	72 psi / 166.32' of H ₂ O
5,857 gpm	20 psi / 46.20' of H ₂ O

The estimated average daily, maximum daily and peak hourly demand for this project is calculated as follows:

Westwood Development - Projected Water Flows

Use Component	Units	Average Daily Flow Rate (gpd)	TOTAL (gpd)
<u>Residential:</u>			
Apartments	352	200	70,400
Single Family Homes	46	350	16,100
Patio Homes	108	350	37,800
Townhomes	127	200	25,400
Apartments	56	200	11,200
Community Building	2	150	300
Sub Total - Residential.....			191,200
Max Daily Flow (Assumes a peaking factor of 2.0)			322,400
<u>Commercial:</u>			
Hotel	130 (Rooms)	120	15,600
Retail/Shopping	115,000 (Sqft)	0.1	11,500
Office	200,000 (Sqft)	0.1	20,000
Senior Living	296 residents	125	37,000
Sub Total - Commercial.....			84,100
Max Daily Flow (Assumes a peaking factor of 2.0)			168,200
TOTAL ADF			245,300
TOTAL Max Day			490,600
Peak Hour (Assumes an average day to peak hour factor of 2.5)			613,250

Average Daily demand for the mixed use development is estimated at 245,300 gpd, with a Maximum daily flow of 490,600 gpd.

Max Daily Demand assumes a factor of 2.0 over the average day demands. The Peak Hourly Flow (PHF) assumes a factor of 2.5 over the average day demands.

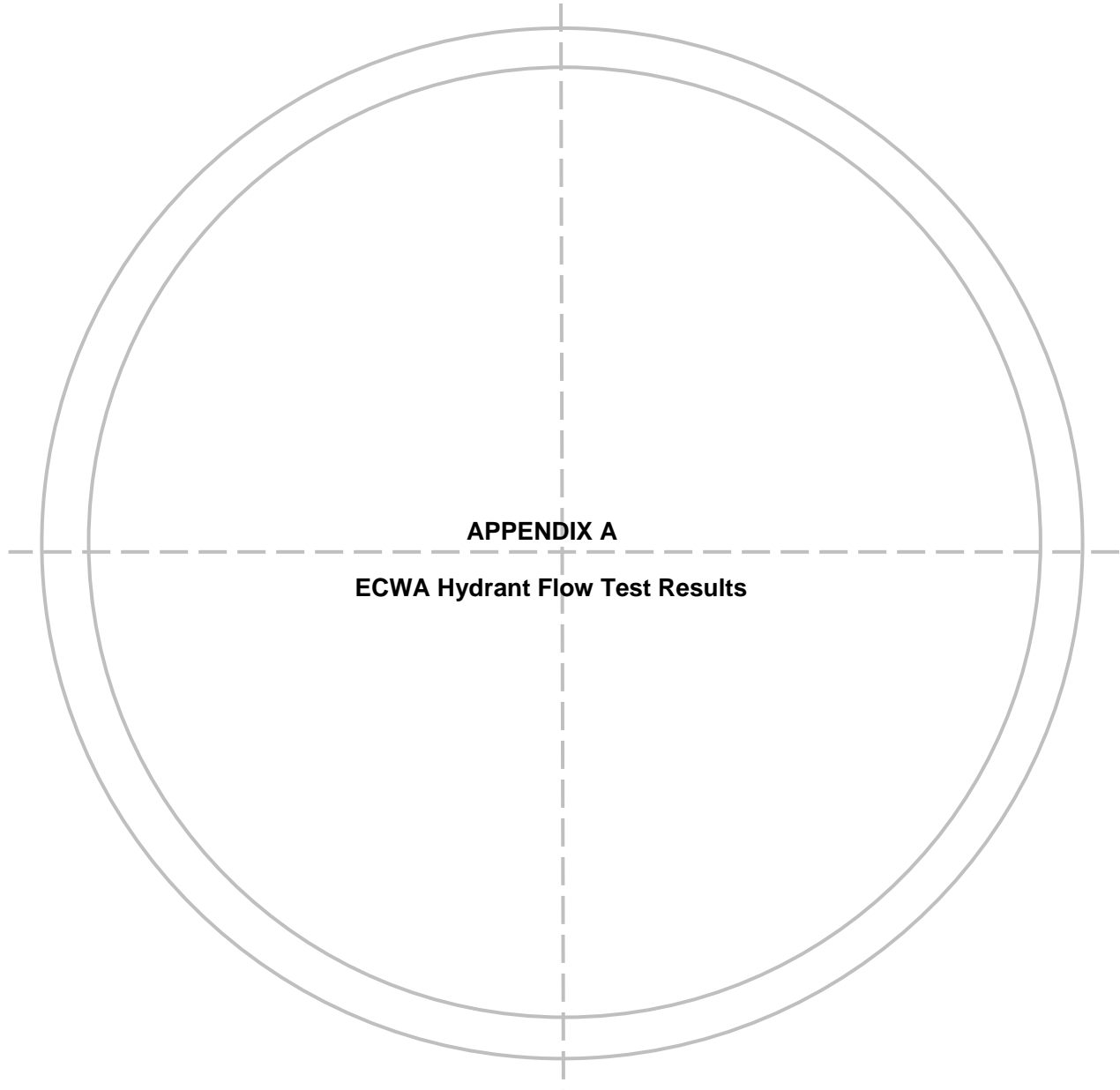
The following table summarizes the Hydraulic Model runs analyzing average day flows, maximum day flows, maximum day flows with fire flows and peak hourly flows. Results are reported for three (3) locations:

- Senior housing complex in the approximate middle of the proposed development,
- Hotel/commercial development in the southern portion of the development, and
- Residential development area in the north and central areas of the development.

The results listed below show that day-to-day operation pressures are sufficient and meet recommended Ten State Standards and that a fire flow of 5,750 gpm (8,280,000 gpd) can be obtained at the senior living complex while maintaining 20 psi at the same location.

It is determined that approximately 4,450± gpm is available at the center of the proposed site. Note, any increase in domestic demand (e.g., maximum day scenario), decreases the amount of water available for emergency demand. (See Appendices for Hydraulic Model Reports)

Flow Condition	Senior Living Complex J23 Pressure (PSI)	Hotel/Commercial Center J33 Pressure (PSI)	Residential Center J14 Pressure (PSI)	Total Flow/Demand gpd
Average Day	86.1	85.7	86.9	245,304
Maximum Day	85.4	85.2	86.3	490,605
Maximum Day with Fire Flow	19.0	54.0	32.1	8,770,605
Peak Hourly	85.0	84.9	85.8	613,254



RESIDUAL HYDRANT

LOCATION.....: 335 MAPLE RD SIDE: S
1ST HYD E/O DONNA LEA

TOWN OF AMHERST

WATER DISTRICT: 315 SIZE OF MAIN: 8
FIRE DISTRICT.: 22021 SIZE BRANCH.: 6

PERFORMED BY: BM, RLS

COMMENTS.....: HYDRANT FLOW TEST VALARIE SARCIONE
NUSSBAUMER & CLARKE, 716-827-8000, 716-826-7958
E-MAIL: VSARCIONE@NUSSCLARKE.COM

DISCHRG COEF: .90
PRESSURE RDGS: ELVTN USGS(FT): .0 STATIC(Psi): 92 RESIDUAL(Psi): 78
TOTAL FLOW(GPM): 2,326 GALLONS USED: 6,960
REQUIRED RESIDUAL PRESSURE...: 20 FLOW AT REQD RESIDUAL PRESSURE.: 5,632

HYD FL NO LOCATION OF FLOW HYDRANTS

J06-C53. 415 MAPLE RD 2ND HYD E/O DONNA LEA

TOWN OF AMHERST SS: S

NZLE SIZE PITOT FLOW WATER DST: 315 FIRE: 22021 SIZE MAIN: 8 BRCH: 6
1. 2.50 48.0 1,163 COMMENTS:
2. 2.50 48.0 1,163
3. TOT FLOW: 2,326

RESIDUAL HYDRANT

LOCATION.....: 4480 SHERIDAN DR SIDE: N
1ST HYD W/O MORGAN PKY
@ C/O NORTH FOREST
TOWN OF AMHERST

WATER DISTRICT: 315 SIZE OF MAIN: 16
FIRE DISTRICT.: 22021 SIZE BRANCH.: 6

PERFORMED BY: BM, RLS

COMMENTS.....: HYDRANT FLOW TEST VALARIE SARCIONE
NUSSBAUMER & CLARKE, 716-827-8000, 716-826-7958
E-MAIL: VSARCIONE@NUSSCLARKE.COM

DISCHRG COEF: .90
PRESSURE RDGS: ELVTN USGS(FT): .0 STATIC(Psi): 84 RESIDUAL(Psi): 72
TOTAL FLOW(GPM): 2,372 GALLONS USED: 7,140
REQUIRED RESIDUAL PRESSURE...: 20 FLOW AT REQD RESIDUAL PRESSURE.: 5,857

HYD FL NO LOCATION OF FLOW HYDRANTS

J06-G63 761 NORTH FOREST RD 1ST HYD N/O SHERIDAN DR
TOWN OF AMHERST SS: E

NZLE SIZE PITOT FLOW WATER DST: 315 FIRE: 22021 SIZE MAIN: 8 BRCH: 6
1. 2.50 50.0 1,186 COMMENTS:
2. 2.50 50.0 1,186
3. TOT FLOW: 2,372

APPENDIX B

Average Day Hydraulic Model Run Results

**Active Scenario: Avg Day - North Forest On
FlexTable: Junction Table**

Current Time: 0.000 hours Demand: 170 gpm

ID	Label	Elevation (ft)	Demand Collection	Demand (gpd)	Hydraulic Grade (ft)	Pressure (psi)
28	J-1	598.00	<Collection: 1 items>	0	798.95	86.9
29	J-2	596.00	<Collection: 1 items>	7,700	798.95	87.8
33	J-4	595.00	<Collection: 1 items>	8,050	798.95	88.2
37	J-5	598.00	<Collection: 1 items>	4,000	798.95	86.9
39	J-6	598.00	<Collection: 1 items>	0	798.95	86.9
41	J-7	597.00	<Collection: 1 items>	6,000	798.95	87.4
44	J-8	598.00	<Collection: 1 items>	3,200	798.95	86.9
46	J-9	598.00	<Collection: 1 items>	150	798.95	86.9
48	J-10	598.00	<Collection: 1 items>	8,750	798.95	86.9
50	J-11	598.00	<Collection: 1 items>	1,600	798.95	86.9
52	J-12	598.00	<Collection: 1 items>	0	798.95	86.9
54	J-13	598.00	<Collection: 1 items>	1,600	798.95	86.9
56	J-14	598.00	<Collection: 1 items>	1,600	798.95	86.9
59	J-15	598.00	<Collection: 1 items>	5,250	798.95	86.9
61	J-16	594.00	<Collection: 1 items>	4,900	798.95	88.7
65	J-17	598.00	<Collection: 1 items>	2,800	798.96	86.9
67	J-18	597.00	<Collection: 1 items>	4,200	798.96	87.4
69	J-19	598.00	<Collection: 1 items>	3,850	798.97	86.9
71	J-20	600.00	<Collection: 1 items>	2,800	798.98	86.1
73	J-21	598.00	<Collection: 1 items>	2,450	798.96	86.9
78	J-23	600.00	<Collection: 1 items>	37,000	798.97	86.1
80	J-24	601.00	<Collection: 1 items>	26,686	799.07	85.7
82	J-25	601.00	<Collection: 1 items>	44,128	799.11	85.7
84	J-26	603.00	<Collection: 1 items>	20,000	799.22	84.9
86	J-27	605.00	<Collection: 1 items>	0	799.30	84.1
88	J-28	600.00	<Collection: 1 items>	0	799.11	86.1
90	J-29	601.00	<Collection: 1 items>	7,400	799.09	85.7
92	J-30	600.00	<Collection: 1 items>	0	799.13	86.2
94	J-31	600.00	<Collection: 1 items>	800	799.15	86.2
96	J-32	601.00	<Collection: 1 items>	800	799.15	85.7
98	J-33	601.00	<Collection: 1 items>	26,686	799.12	85.7
101	J-34	601.00	<Collection: 1 items>	1,600	799.18	85.7
103	J-35	601.00	<Collection: 1 items>	1,600	799.18	85.7
105	J-36	602.00	<Collection: 1 items>	150	799.21	85.3
107	J-37	602.00	<Collection: 1 items>	1,600	799.22	85.3
109	J-38	603.00	<Collection: 1 items>	1,600	799.23	84.9
111	J-39	604.00	<Collection: 1 items>	1,600	799.24	84.5
113	J-40	604.00	<Collection: 1 items>	0	799.24	84.5
115	J-41	605.00	<Collection: 1 items>	0	799.30	84.1
117	J-42	603.00	<Collection: 1 items>	0	799.22	84.9
123	J-43	605.00	<Collection: 1 items>	0	799.33	84.1
125	J-44	605.00	<Collection: 1 items>	0	799.33	84.1
127	J-45	604.00	<Collection: 1 items>	(N/A)	(N/A)	(N/A)
133	J-46	601.00	<Collection: 1 items>	0	799.30	85.8

**Active Scenario: Avg Day - North Forest On
FlexTable: Junction Table**

Current Time: 0.000 hours

ID	Label	Elevation (ft)	Demand Collection	Demand (gpd)	Hydraulic Grade (ft)	Pressure (psi)
134	J-47	602.00	<Collection: 1 items>	0	799.30	85.4
136	J-48	603.00	<Collection: 1 items>	0	799.30	84.9
138	J-49	604.00	<Collection: 1 items>	0	799.30	84.5
141	J-50	605.00	<Collection: 1 items>	0	799.30	84.1
162	J-54	595.27	<Collection: 1 items>	3,150	798.95	88.1
171	J-57	601.00	<Collection: 1 items>	0	799.30	85.8
173	J-58	601.00	<Collection: 1 items>	0	799.30	85.8
176	J-59	595.00	<Collection: 1 items>	0	798.95	88.2
187	J-62	599.00	<Collection: 1 items>	0	798.95	86.5
216	J-65	602.00	<Collection: 1 items>	1,600	799.22	85.3

Active Scenario: Avg Day - North Forest On
FlexTable: Pipe Table

Current Time: 0.000 hours

ID	Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Hazen- Williams C	Flow (gpd)	Velocity (ft/s)	Headloss Gradient (ft/ft)
30	P-1	589	J-1	J-2	8.0	120.0	-1	0.00	0.000
36	P-5	420	J-2	J-4	8.0	120.0	-5,841	0.03	0.000
38	P-6	461	J-2	J-5	8.0	120.0	-104	0.00	0.000
40	P-7	126	J-5	J-6	8.0	120.0	1	0.00	0.000
42	P-8	516	J-5	J-7	8.0	120.0	-4,105	0.02	0.000
43	P-9	458	J-7	J-4	8.0	120.0	-3,206	0.01	0.000
45	P-10	1,094	J-7	J-8	8.0	120.0	-6,899	0.03	0.000
47	P-11	174	J-8	J-9	8.0	120.0	-11,699	0.05	0.000
49	P-12	396	J-9	J-10	8.0	120.0	-15,049	0.07	0.000
51	P-13	275	J-8	J-11	8.0	120.0	1,600	0.01	0.000
53	P-14	114	J-9	J-12	8.0	120.0	3,200	0.01	0.000
55	P-15	152	J-12	J-13	8.0	120.0	1,600	0.01	0.000
57	P-16	148	J-12	J-14	8.0	120.0	1,600	0.01	0.000
58	P-17	981	J-4	J-10	8.0	120.0	-12,890	0.06	0.000
60	P-18	311	J-10	J-15	8.0	120.0	-8,339	0.04	0.000
63	P-20	307	J-16	J-4	8.0	120.0	4,207	0.02	0.000
64	P-21	926	J-16	J-15	8.0	120.0	-14,013	0.06	0.000
66	P-22	271	J-15	J-17	8.0	120.0	-27,602	0.12	0.000
68	P-23	371	J-17	J-18	8.0	120.0	-20,557	0.09	0.000
70	P-24	721	J-18	J-19	8.0	120.0	-24,757	0.11	0.000
72	P-25	550	J-19	J-20	8.0	120.0	-28,607	0.13	0.000
74	P-26	642	J-20	J-21	8.0	120.0	40,645	0.18	0.000
75	P-27	363	J-21	J-10	8.0	120.0	28,350	0.13	0.000
76	P-28	516	J-17	J-21	8.0	120.0	-9,845	0.04	0.000
79	P-29	181	J-20	J-23	8.0	120.0	37,000	0.16	0.000
81	P-30	519	J-20	J-24	8.0	120.0	-109,052	0.48	0.000
83	P-31	385	J-24	J-25	8.0	120.0	-86,022	0.38	0.000
85	P-32	597	J-25	J-26	8.0	120.0	-110,458	0.49	0.000
87	P-33	413	J-26	J-27	8.0	120.0	-114,593	0.51	0.000
89	P-34	195	J-25	J-28	8.0	120.0	0	0.00	0.000
91	P-35	491	J-24	J-29	8.0	120.0	-49,716	0.22	0.000
93	P-36	795	J-29	J-30	8.0	120.0	-57,116	0.25	0.000
95	P-37	108	J-30	J-31	8.0	120.0	-103,494	0.46	0.000
97	P-38	363	J-31	J-32	8.0	120.0	800	0.00	0.000
99	P-39	493	J-25	J-33	8.0	120.0	-19,692	0.09	0.000
100	P-40	419	J-33	J-30	8.0	120.0	-46,378	0.21	0.000
102	P-41	210	J-31	J-34	8.0	120.0	-105,094	0.47	0.000
104	P-42	372	J-34	J-35	8.0	120.0	1,600	0.01	0.000
106	P-43	179	J-34	J-36	8.0	120.0	-108,294	0.48	0.000
110	P-45	186	J-37	J-38	8.0	120.0	-38,816	0.17	0.000
112	P-46	378	J-38	J-39	8.0	120.0	-40,416	0.18	0.000
114	P-47	145	J-39	J-40	8.0	120.0	-42,016	0.19	0.000
116	P-48	244	J-40	J-41	8.0	120.0	-130,709	0.58	0.000
118	P-49	114	J-36	J-42	8.0	120.0	-72,827	0.32	0.000

Active Scenario: Avg Day - North Forest On

FlexTable: Pipe Table

Current Time: 0.000 hours

ID	Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Hazen- Williams C	Flow (gpd)	Velocity (ft/s)	Headloss Gradient (ft/ft)
119	P-50	167	J-42	J-40	8.0	120.0	-88,692	0.39	0.000
120	P-51	725	J-26	J-42	8.0	120.0	-15,865	0.07	0.000
124	P-52	967	J-41	J-43	16.0	130.0	-245,304	0.27	0.000
126	P-53	183	J-43	J-44	16.0	110.0	0	0.00	0.000
131	P-55	167	J-45	R-2	6.0	130.0	(N/A)	(N/A)	(N/A)
132	P-56	718	J-27	J-41	16.0	130.0	-114,595	0.13	0.000
135	P-57	201	J-46	J-47	6.0	130.0	0	0.00	0.000
137	P-58	192	J-47	J-48	6.0	130.0	0	0.00	0.000
139	P-59	432	J-48	J-49	6.0	130.0	-1	0.00	0.000
142	P-61	492	J-49	J-50	8.0	130.0	-2	0.00	0.000
143	P-62	143	J-50	J-27	12.0	130.0	-2	0.00	0.000
163	P-63	427	J-2	J-54	8.0	120.0	-1,756	0.01	0.000
164	P-64	747	J-54	J-16	8.0	120.0	-4,906	0.02	0.000
170	P-65	800	R-3	PMP-1	24.0	130.0	-1	0.00	0.000
172	P-66	120	PMP-1	J-57	6.0	130.0	-1	0.00	0.000
174	P-67	181	J-57	J-58	8.0	130.0	-1	0.00	0.000
175	P-68	577	J-58	J-49	8.0	130.0	-1	0.00	0.000
188	P-75	407	J-1	J-62	8.0	130.0	0	0.00	0.000
205	P-84	39	R-5	J-45	8.0	110.0	(N/A)	(N/A)	(N/A)
207	P-85	35	J-43	PMP-3	16.0	110.0	-245,304	0.27	0.000
208	P-86	331	PMP-3	R-5	24.0	110.0	-245,304	0.12	0.000
212	P-87	3,113	J-62	J-59	8.0	130.0	0	0.00	0.000
214	P-88	443	J-1	PMP-4	8.0	120.0	1	0.00	0.000
215	P-89	64	PMP-4	R-4	24.0	130.0	1	0.00	0.000
217	P-90	230	J-36	J-65	8.0	120.0	-35,616	0.16	0.000
218	P-91	193	J-65	J-37	8.0	120.0	-37,216	0.16	0.000

Length (User
Defined)
(ft)

0
0
0
0
0
0
0
0
0
0
0
0
0
0
0
0

**Active Scenario: Avg Day - North Forest On
FlexTable: Pipe Table**

Current Time: 0.000 hours

Length (User Defined) (ft)
0
250
0
0
0
1
0
0
1
0
0

Active Scenario: Avg Day - North Forest On
FlexTable: Pump Table

Current Time: 0.000 hours

ID	Label	Elevation (ft)	Pump Definition	Status (Initial)	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpd)	Pump Head (ft)
169	PMP-1	601.00	Sunrise/Sheridan	Off	600.50	799.30	0	0.00
206	PMP-3	604.92	North Forest	On	605.50	799.33	245,304	193.83
213	PMP-4	598.00	Donna Lee	Off	598.00	798.95	0	0.00

Active Scenario: Avg Day - North Forest On
FlexTable: Reservoir Table

Current Time: 0.000 hours

ID	Label	Elevation (ft)	Zone	Flow (Out net) (gpd)	Hydraulic Grade (ft)
130	R-2	0.00	<None>	(N/A)	(N/A)
168	R-3	600.50	<None>	-1	600.50
200	R-4	598.00	<None>	-1	598.00
203	R-5	605.50	<None>	245,304	605.50

APPENDIX C

Maximum Day Hydraulic Model Run Results

**Active Scenario: Max Day - North Forest On
FlexTable: Junction Table**

Current Time: 0.000 hours Demand: 341 gpm

ID	Label	Elevation (ft)	Demand Collection	Demand (gpd)	Hydraulic Grade (ft)	Pressure (psi)
28	J-1	598.00	<Collection: 1 items>	0	797.40	86.3
29	J-2	596.00	<Collection: 1 items>	15,400	797.40	87.1
33	J-4	595.00	<Collection: 1 items>	16,100	797.40	87.6
37	J-5	598.00	<Collection: 1 items>	8,000	797.40	86.3
39	J-6	598.00	<Collection: 1 items>	0	797.40	86.3
41	J-7	597.00	<Collection: 1 items>	12,000	797.40	86.7
44	J-8	598.00	<Collection: 1 items>	6,400	797.41	86.3
46	J-9	598.00	<Collection: 1 items>	300	797.41	86.3
48	J-10	598.00	<Collection: 1 items>	17,500	797.42	86.3
50	J-11	598.00	<Collection: 1 items>	3,200	797.41	86.3
52	J-12	598.00	<Collection: 1 items>	0	797.41	86.3
54	J-13	598.00	<Collection: 1 items>	3,200	797.41	86.3
56	J-14	598.00	<Collection: 1 items>	3,200	797.41	86.3
59	J-15	598.00	<Collection: 1 items>	10,500	797.42	86.3
61	J-16	594.00	<Collection: 1 items>	9,800	797.40	88.0
65	J-17	598.00	<Collection: 1 items>	5,600	797.43	86.3
67	J-18	597.00	<Collection: 1 items>	8,400	797.44	86.7
69	J-19	598.00	<Collection: 1 items>	7,700	797.47	86.3
71	J-20	600.00	<Collection: 1 items>	5,600	797.50	85.4
73	J-21	598.00	<Collection: 1 items>	4,900	797.44	86.3
78	J-23	600.00	<Collection: 1 items>	74,000	797.49	85.4
80	J-24	601.00	<Collection: 1 items>	53,372	797.83	85.2
82	J-25	601.00	<Collection: 1 items>	88,257	797.99	85.2
84	J-26	603.00	<Collection: 1 items>	40,000	798.39	84.5
86	J-27	605.00	<Collection: 1 items>	0	798.68	83.8
88	J-28	600.00	<Collection: 1 items>	0	797.99	85.7
90	J-29	601.00	<Collection: 1 items>	14,400	797.91	85.2
92	J-30	600.00	<Collection: 1 items>	0	798.06	85.7
94	J-31	600.00	<Collection: 0 items>	1,600	798.13	85.7
96	J-32	601.00	<Collection: 0 items>	1,600	798.13	85.3
98	J-33	601.00	<Collection: 1 items>	53,371	798.01	85.2
101	J-34	601.00	<Collection: 0 items>	3,200	798.25	85.3
103	J-35	601.00	<Collection: 0 items>	3,200	798.25	85.3
105	J-36	602.00	<Collection: 1 items>	300	798.36	85.0
107	J-37	602.00	<Collection: 0 items>	3,200	798.40	85.0
109	J-38	603.00	<Collection: 0 items>	3,200	798.42	84.5
111	J-39	604.00	<Collection: 0 items>	3,200	798.46	84.1
113	J-40	604.00	<Collection: 1 items>	0	798.47	84.1
115	J-41	605.00	<Collection: 1 items>	0	798.69	83.8
117	J-42	603.00	<Collection: 1 items>	0	798.40	84.5
123	J-43	605.00	<Collection: 1 items>	0	798.77	83.8
125	J-44	605.00	<Collection: 1 items>	0	798.77	83.8
127	J-45	604.00	<Collection: 1 items>	(N/A)	(N/A)	(N/A)
133	J-46	601.00	<Collection: 1 items>	0	798.68	85.5

**Active Scenario: Max Day - North Forest On
FlexTable: Junction Table**

Current Time: 0.000 hours

ID	Label	Elevation (ft)	Demand Collection	Demand (gpd)	Hydraulic Grade (ft)	Pressure (psi)
134	J-47	602.00	<Collection: 1 items>	0	798.68	85.1
136	J-48	603.00	<Collection: 1 items>	0	798.68	84.7
138	J-49	604.00	<Collection: 1 items>	0	798.68	84.2
141	J-50	605.00	<Collection: 1 items>	0	798.68	83.8
162	J-54	595.27	<Collection: 1 items>	6,300	797.40	87.5
171	J-57	601.00	<Collection: 1 items>	0	798.68	85.5
173	J-58	601.00	<Collection: 1 items>	0	798.68	85.5
176	J-59	595.00	<Collection: 1 items>	0	797.40	87.6
187	J-62	599.00	<Collection: 1 items>	0	797.40	85.8
216	J-65	602.00	<Collection: 0 items>	3,600	798.38	85.0

Active Scenario: Max Day - North Forest On
FlexTable: Pipe Table

Current Time: 0.000 hours

ID	Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Hazen- Williams C	Flow (gpd)	Velocity (ft/s)	Headloss Gradient (ft/ft)
30	P-1	589	J-1	J-2	8.0	120.0	-1	0.00	0.000
36	P-5	420	J-2	J-4	8.0	120.0	-11,681	0.05	0.000
38	P-6	461	J-2	J-5	8.0	120.0	-208	0.00	0.000
40	P-7	126	J-5	J-6	8.0	120.0	0	0.00	0.000
42	P-8	516	J-5	J-7	8.0	120.0	-8,208	0.04	0.000
43	P-9	458	J-7	J-4	8.0	120.0	-6,411	0.03	0.000
45	P-10	1,094	J-7	J-8	8.0	120.0	-13,797	0.06	0.000
47	P-11	174	J-8	J-9	8.0	120.0	-23,397	0.10	0.000
49	P-12	396	J-9	J-10	8.0	120.0	-30,097	0.13	0.000
51	P-13	275	J-8	J-11	8.0	120.0	3,200	0.01	0.000
53	P-14	114	J-9	J-12	8.0	120.0	6,400	0.03	0.000
55	P-15	152	J-12	J-13	8.0	120.0	3,200	0.01	0.000
57	P-16	148	J-12	J-14	8.0	120.0	3,200	0.01	0.000
58	P-17	981	J-4	J-10	8.0	120.0	-25,779	0.11	0.000
60	P-18	311	J-10	J-15	8.0	120.0	-16,678	0.07	0.000
63	P-20	307	J-16	J-4	8.0	120.0	8,413	0.04	0.000
64	P-21	926	J-16	J-15	8.0	120.0	-28,025	0.12	0.000
66	P-22	271	J-15	J-17	8.0	120.0	-55,203	0.24	0.000
68	P-23	371	J-17	J-18	8.0	120.0	-41,113	0.18	0.000
70	P-24	721	J-18	J-19	8.0	120.0	-49,513	0.22	0.000
72	P-25	550	J-19	J-20	8.0	120.0	-57,213	0.25	0.000
74	P-26	642	J-20	J-21	8.0	120.0	81,288	0.36	0.000
75	P-27	363	J-21	J-10	8.0	120.0	56,699	0.25	0.000
76	P-28	516	J-17	J-21	8.0	120.0	-19,690	0.09	0.000
79	P-29	181	J-20	J-23	8.0	120.0	74,000	0.33	0.000
81	P-30	519	J-20	J-24	8.0	120.0	-218,101	0.97	0.001
83	P-31	385	J-24	J-25	8.0	120.0	-171,868	0.76	0.000
85	P-32	597	J-25	J-26	8.0	120.0	-220,756	0.98	0.001
87	P-33	413	J-26	J-27	8.0	120.0	-229,153	1.02	0.001
89	P-34	195	J-25	J-28	8.0	120.0	1	0.00	0.000
91	P-35	491	J-24	J-29	8.0	120.0	-99,605	0.44	0.000
93	P-36	795	J-29	J-30	8.0	120.0	-114,005	0.51	0.000
95	P-37	108	J-30	J-31	8.0	120.0	-206,746	0.92	0.001
97	P-38	363	J-31	J-32	8.0	120.0	1,600	0.01	0.000
99	P-39	493	J-25	J-33	8.0	120.0	-39,370	0.17	0.000
100	P-40	419	J-33	J-30	8.0	120.0	-92,741	0.41	0.000
102	P-41	210	J-31	J-34	8.0	120.0	-209,946	0.93	0.001
104	P-42	372	J-34	J-35	8.0	120.0	3,200	0.01	0.000
106	P-43	179	J-34	J-36	8.0	120.0	-216,346	0.96	0.001
110	P-45	186	J-37	J-38	8.0	120.0	-77,709	0.34	0.000
112	P-46	378	J-38	J-39	8.0	120.0	-80,909	0.36	0.000
114	P-47	145	J-39	J-40	8.0	120.0	-84,109	0.37	0.000
116	P-48	244	J-40	J-41	8.0	120.0	-261,449	1.16	0.001
118	P-49	114	J-36	J-42	8.0	120.0	-145,737	0.65	0.000

Active Scenario: Max Day - North Forest On
FlexTable: Pipe Table

Current Time: 0.000 hours

ID	Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Hazen- Williams C	Flow (gpd)	Velocity (ft/s)	Headloss Gradient (ft/ft)
119	P-50	167	J-42	J-40	8.0	120.0	-177,340	0.79	0.000
120	P-51	725	J-26	J-42	8.0	120.0	-31,603	0.14	0.000
124	P-52	967	J-41	J-43	16.0	130.0	-490,605	0.54	0.000
126	P-53	183	J-43	J-44	16.0	110.0	1	0.00	0.000
131	P-55	167	J-45	R-2	6.0	130.0	(N/A)	(N/A)	(N/A)
132	P-56	718	J-27	J-41	16.0	130.0	-229,156	0.25	0.000
135	P-57	201	J-46	J-47	6.0	130.0	0	0.00	0.000
137	P-58	192	J-47	J-48	6.0	130.0	0	0.00	0.000
139	P-59	432	J-48	J-49	6.0	130.0	-1	0.00	0.000
142	P-61	492	J-49	J-50	8.0	130.0	-2	0.00	0.000
143	P-62	143	J-50	J-27	12.0	130.0	-2	0.00	0.000
163	P-63	427	J-2	J-54	8.0	120.0	-3,512	0.02	0.000
164	P-64	747	J-54	J-16	8.0	120.0	-9,812	0.04	0.000
170	P-65	800	R-3	PMP-1	24.0	130.0	-1	0.00	0.000
172	P-66	120	PMP-1	J-57	6.0	130.0	-1	0.00	0.000
174	P-67	181	J-57	J-58	8.0	130.0	-1	0.00	0.000
175	P-68	577	J-58	J-49	8.0	130.0	-1	0.00	0.000
188	P-75	407	J-1	J-62	8.0	130.0	0	0.00	0.000
205	P-84	39	R-5	J-45	8.0	110.0	(N/A)	(N/A)	(N/A)
207	P-85	35	J-43	PMP-3	16.0	110.0	-490,605	0.54	0.000
208	P-86	331	PMP-3	R-5	24.0	110.0	-490,605	0.24	0.000
212	P-87	3,113	J-62	J-59	8.0	130.0	0	0.00	0.000
214	P-88	443	J-1	PMP-4	8.0	120.0	1	0.00	0.000
215	P-89	64	PMP-4	R-4	24.0	130.0	1	0.00	0.000
217	P-90	230	J-36	J-65	8.0	120.0	-70,909	0.31	0.000
218	P-91	193	J-65	J-37	8.0	120.0	-74,509	0.33	0.000

Length (User Defined)
(ft)

0
0
0
0
0
0
0
0
0
0
0
0
0
0
0
0
0

**Active Scenario: Max Day - North Forest On
FlexTable: Pipe Table**

Current Time: 0.000 hours

Length (User
Defined)
(ft)

0
250
0
0
0
1
0
0
1
0
0

Active Scenario: Max Day - North Forest On
FlexTable: Pump Table

Current Time: 0.000 hours

ID	Label	Elevation (ft)	Pump Definition	Status (Initial)	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpd)	Pump Head (ft)
169	PMP-1	601.00	Sunrise/Sheridan	Off	600.50	798.68	0	0.00
206	PMP-3	604.92	North Forest	On	605.50	798.78	490,605	193.28
213	PMP-4	598.00	Donna Lee	Off	598.00	797.40	0	0.00

**Active Scenario: Max Day - North Forest On
FlexTable: Reservoir Table**

Current Time: 0.000 hours

ID	Label	Elevation (ft)	Zone	Flow (Out net) (gpd)	Hydraulic Grade (ft)
130	R-2	0.00	<None>	(N/A)	(N/A)
168	R-3	600.50	<None>	-1	600.50
200	R-4	598.00	<None>	-1	598.00
203	R-5	605.50	<None>	490,605	605.50

APPENDIX D

Maximum Day Plus Fire Flow Hydraulic Model Run Results

**Active Scenario: Max Day Fire Flow, Both On
FlexTable: Junction Table**

Current Time: 0.000 hours Demand: 4,841 gpm

ID	Label	Elevation (ft)	Demand Collection	Demand (gpd)	Hydraulic Grade (ft)	Pressure (psi)
28	J-1	598.00	<Collection: 1 items>	0	744.25	63.3
29	J-2	596.00	<Collection: 1 items>	15,400	693.13	42.0
33	J-4	595.00	<Collection: 1 items>	16,100	684.94	38.9
37	J-5	598.00	<Collection: 1 items>	8,000	689.24	39.5
39	J-6	598.00	<Collection: 1 items>	0	689.24	39.5
41	J-7	597.00	<Collection: 1 items>	12,000	684.96	38.1
44	J-8	598.00	<Collection: 1 items>	6,400	676.86	34.1
46	J-9	598.00	<Collection: 1 items>	300	675.60	33.6
48	J-10	598.00	<Collection: 1 items>	17,500	672.78	32.4
50	J-11	598.00	<Collection: 1 items>	3,200	676.86	34.1
52	J-12	598.00	<Collection: 1 items>	0	675.60	33.6
54	J-13	598.00	<Collection: 1 items>	3,200	675.60	33.6
56	J-14	598.00	<Collection: 1 items>	3,200	675.60	33.6
59	J-15	598.00	<Collection: 1 items>	10,500	672.15	32.1
61	J-16	594.00	<Collection: 1 items>	9,800	684.53	39.2
65	J-17	598.00	<Collection: 1 items>	5,600	665.85	29.4
67	J-18	597.00	<Collection: 1 items>	8,400	660.79	27.6
69	J-19	598.00	<Collection: 1 items>	7,700	651.09	23.0
71	J-20	600.00	<Collection: 1 items>	6,485,600	643.79	18.9
73	J-21	598.00	<Collection: 1 items>	4,900	664.94	29.0
78	J-23	600.00	<Collection: 1 items>	74,000	643.78	18.9
80	J-24	601.00	<Collection: 1 items>	53,372	704.15	44.6
82	J-25	601.00	<Collection: 1 items>	88,257	724.40	53.4
84	J-26	603.00	<Collection: 1 items>	40,000	746.35	62.0
86	J-27	605.00	<Collection: 1 items>	0	759.68	66.9
88	J-28	600.00	<Collection: 1 items>	0	724.40	53.8
90	J-29	601.00	<Collection: 1 items>	14,400	712.92	48.4
92	J-30	600.00	<Collection: 1 items>	0	727.41	55.1
94	J-31	600.00	<Collection: 0 items>	1,600	731.17	56.7
96	J-32	601.00	<Collection: 0 items>	1,600	731.17	56.3
98	J-33	601.00	<Collection: 1 items>	53,371	725.89	54.0
101	J-34	601.00	<Collection: 0 items>	3,200	738.49	59.5
103	J-35	601.00	<Collection: 0 items>	3,200	738.49	59.5
105	J-36	602.00	<Collection: 1 items>	300	744.77	61.8
107	J-37	602.00	<Collection: 0 items>	3,200	746.75	62.6
109	J-38	603.00	<Collection: 0 items>	3,200	747.64	62.6
111	J-39	604.00	<Collection: 0 items>	3,200	749.45	62.9
113	J-40	604.00	<Collection: 1 items>	0	750.15	63.2
115	J-41	605.00	<Collection: 1 items>	0	760.36	67.2
117	J-42	603.00	<Collection: 1 items>	0	746.66	62.2
123	J-43	605.00	<Collection: 1 items>	0	764.16	68.9
125	J-44	605.00	<Collection: 1 items>	0	764.16	68.9
127	J-45	604.00	<Collection: 1 items>	(N/A)	(N/A)	(N/A)
133	J-46	601.00	<Collection: 1 items>	0	759.68	68.7

**Active Scenario: Max Day Fire Flow, Both On
FlexTable: Junction Table**

Current Time: 0.000 hours

ID	Label	Elevation (ft)	Demand Collection	Demand (gpd)	Hydraulic Grade (ft)	Pressure (psi)
134	J-47	602.00	<Collection: 1 items>	0	759.68	68.2
136	J-48	603.00	<Collection: 1 items>	0	759.68	67.8
138	J-49	604.00	<Collection: 1 items>	0	759.68	67.4
141	J-50	605.00	<Collection: 1 items>	0	759.68	66.9
162	J-54	595.27	<Collection: 1 items>	6,300	689.98	41.0
171	J-57	601.00	<Collection: 1 items>	0	759.68	68.7
173	J-58	601.00	<Collection: 1 items>	0	759.68	68.7
176	J-59	595.00	<Collection: 1 items>	0	744.25	64.6
187	J-62	599.00	<Collection: 1 items>	0	744.25	62.8
216	J-65	602.00	<Collection: 0 items>	3,600	745.85	62.2

Active Scenario: Max Day Fire Flow, Both On
FlexTable: Pipe Table

Current Time: 0.000 hours

ID	Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Hazer- Williams C	Flow (gpd)	Velocity (ft/s)	Headloss Gradient (ft/ft)
30	P-1	589	J-1	J-2	8.0	120.0	3,084,802	13.67	0.087
36	P-5	420	J-2	J-4	8.0	120.0	1,377,548	6.11	0.020
38	P-6	461	J-2	J-5	8.0	120.0	876,174	3.88	0.008
40	P-7	126	J-5	J-6	8.0	120.0	1	0.00	0.000
42	P-8	516	J-5	J-7	8.0	120.0	868,173	3.85	0.008
43	P-9	458	J-7	J-4	8.0	120.0	40,020	0.18	0.000
45	P-10	1,094	J-7	J-8	8.0	120.0	816,153	3.62	0.007
47	P-11	174	J-8	J-9	8.0	120.0	806,553	3.58	0.007
49	P-12	396	J-9	J-10	8.0	120.0	799,853	3.55	0.007
51	P-13	275	J-8	J-11	8.0	120.0	3,200	0.01	0.000
53	P-14	114	J-9	J-12	8.0	120.0	6,400	0.03	0.000
55	P-15	152	J-12	J-13	8.0	120.0	3,200	0.01	0.000
57	P-16	148	J-12	J-14	8.0	120.0	3,200	0.01	0.000
58	P-17	981	J-4	J-10	8.0	120.0	1,078,212	4.78	0.012
60	P-18	311	J-10	J-15	8.0	120.0	404,177	1.79	0.002
63	P-20	307	J-16	J-4	8.0	120.0	-323,256	1.43	0.001
64	P-21	926	J-16	J-15	8.0	120.0	1,122,835	4.98	0.013
66	P-22	271	J-15	J-17	8.0	120.0	1,516,512	6.72	0.023
68	P-23	371	J-17	J-18	8.0	120.0	1,135,197	5.03	0.014
70	P-24	721	J-18	J-19	8.0	120.0	1,126,797	4.99	0.013
72	P-25	550	J-19	J-20	8.0	120.0	1,119,097	4.96	0.013
74	P-26	642	J-20	J-21	8.0	120.0	-1,827,204	8.10	0.033
75	P-27	363	J-21	J-10	8.0	120.0	-1,456,388	6.46	0.022
76	P-28	516	J-17	J-21	8.0	120.0	375,715	1.67	0.002
79	P-29	181	J-20	J-23	8.0	120.0	74,000	0.33	0.000
81	P-30	519	J-20	J-24	8.0	120.0	-3,613,299	16.02	0.116
83	P-31	385	J-24	J-25	8.0	120.0	-2,353,700	10.43	0.053
85	P-32	597	J-25	J-26	8.0	120.0	-1,940,059	8.60	0.037
87	P-33	413	J-26	J-27	8.0	120.0	-1,807,216	8.01	0.032
89	P-34	195	J-25	J-28	8.0	120.0	1	0.00	0.000
91	P-35	491	J-24	J-29	8.0	120.0	-1,312,971	5.82	0.018
93	P-36	795	J-29	J-30	8.0	120.0	-1,327,371	5.88	0.018
95	P-37	108	J-30	J-31	8.0	120.0	-1,882,640	8.34	0.035
97	P-38	363	J-31	J-32	8.0	120.0	1,600	0.01	0.000
99	P-39	493	J-25	J-33	8.0	120.0	-501,898	2.22	0.003
100	P-40	419	J-33	J-30	8.0	120.0	-555,269	2.46	0.004
102	P-41	210	J-31	J-34	8.0	120.0	-1,885,840	8.36	0.035
104	P-42	372	J-34	J-35	8.0	120.0	3,200	0.01	0.000
106	P-43	179	J-34	J-36	8.0	120.0	-1,892,240	8.39	0.035
110	P-45	186	J-37	J-38	8.0	120.0	-641,779	2.84	0.005
112	P-46	378	J-38	J-39	8.0	120.0	-644,979	2.86	0.005
114	P-47	145	J-39	J-40	8.0	120.0	-648,179	2.87	0.005
116	P-48	244	J-40	J-41	8.0	120.0	-2,078,583	9.21	0.042
118	P-49	114	J-36	J-42	8.0	120.0	-1,257,561	5.57	0.016

**Active Scenario: Max Day Fire Flow, Both On
FlexTable: Pipe Table**

Current Time: 0.000 hours

ID	Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Hazen- Williams C	Flow (gpd)	Velocity (ft/s)	Headloss Gradient (ft/ft)
119	P-50	167	J-42	J-40	8.0	120.0	-1,430,405	6.34	0.021
120	P-51	725	J-26	J-42	8.0	120.0	-172,843	0.77	0.000
124	P-52	967	J-41	J-43	16.0	130.0	-3,885,801	4.31	0.004
126	P-53	183	J-43	J-44	16.0	110.0	0	0.00	0.000
131	P-55	167	J-45	R-2	6.0	130.0	(N/A)	(N/A)	(N/A)
132	P-56	718	J-27	J-41	16.0	130.0	-1,807,218	2.00	0.001
135	P-57	201	J-46	J-47	6.0	130.0	0	0.00	0.000
137	P-58	192	J-47	J-48	6.0	130.0	0	0.00	0.000
139	P-59	432	J-48	J-49	6.0	130.0	-1	0.00	0.000
142	P-61	492	J-49	J-50	8.0	130.0	-2	0.00	0.000
143	P-62	143	J-50	J-27	12.0	130.0	-2	0.00	0.000
163	P-63	427	J-2	J-54	8.0	120.0	815,680	3.62	0.007
164	P-64	747	J-54	J-16	8.0	120.0	809,380	3.59	0.007
170	P-65	800	R-3	PMP-1	24.0	130.0	-1	0.00	0.000
172	P-66	120	PMP-1	J-57	6.0	130.0	-1	0.00	0.000
174	P-67	181	J-57	J-58	8.0	130.0	-1	0.00	0.000
175	P-68	577	J-58	J-49	8.0	130.0	-1	0.00	0.000
188	P-75	407	J-1	J-62	8.0	130.0	0	0.00	0.000
205	P-84	39	R-5	J-45	8.0	110.0	(N/A)	(N/A)	(N/A)
207	P-85	35	J-43	PMP-3	16.0	110.0	-3,885,802	4.31	0.005
208	P-86	331	PMP-3	R-5	24.0	110.0	-3,885,802	1.91	0.001
212	P-87	3,113	J-62	J-59	8.0	130.0	0	0.00	0.000
214	P-88	443	J-1	PMP-4	8.0	120.0	-3,084,802	13.67	0.087
215	P-89	64	PMP-4	R-4	24.0	130.0	-3,084,802	1.52	0.000
217	P-90	230	J-36	J-65	8.0	120.0	-634,979	2.81	0.005
218	P-91	193	J-65	J-37	8.0	120.0	-638,579	2.83	0.005

Length (User
Defined)
(ft)

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**Active Scenario: Max Day Fire Flow, Both On
FlexTable: Pipe Table**

Current Time: 0.000 hours

Length (User
Defined)
(ft)

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**Active Scenario: Max Day Fire Flow, Both On
FlexTable: Pipe Table**

Current Time: 0.000 hours

Length (User
Defined)
(ft)

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Active Scenario: Max Day Fire Flow, Both On
FlexTable: Pump Table

Current Time: 0.000 hours

ID	Label	Elevation (ft)	Pump Definition	Status (Initial)	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpd)	Pump Head (ft)
169	PMP-1	601.00	Sunrise/Sheridan	Off	600.50	759.68	0	0.00
206	PMP-3	604.92	North Forest	On	605.50	764.34	3,885,802	158.84
213	PMP-4	598.00	Donna Lee	On	598.00	782.75	3,084,802	184.75

**Active Scenario: Max Day Fire Flow, Both On
FlexTable: Reservoir Table**

Current Time: 0.000 hours

ID	Label	Elevation (ft)	Zone	Flow (Out net) (gpd)	Hydraulic Grade (ft)
130	R-2	0.00	<None>	(N/A)	(N/A)
168	R-3	600.50	<None>	-1	600.50
200	R-4	598.00	<None>	3,084,802	598.00
203	R-5	605.50	<None>	3,885,802	605.50

APPENDIX E

Peak Hour Hydraulic Model Run Results

**Active Scenario: Peak Hour - North Forest On
FlexTable: Junction Table**

Current Time: 0.000 hours Demand: 426 gpm

ID	Label	Elevation (ft)	Demand Collection	Demand (gpd)	Hydraulic Grade (ft)	Pressure (psi)
28	J-1	598.00	<Collection: 1 items>	0	796.31	85.8
29	J-2	596.00	<Collection: 1 items>	19,250	796.31	86.7
33	J-4	595.00	<Collection: 1 items>	20,125	796.31	87.1
37	J-5	598.00	<Collection: 0 items>	10,000	796.31	85.8
39	J-6	598.00	<Collection: 1 items>	0	796.31	85.8
41	J-7	597.00	<Collection: 1 items>	15,000	796.31	86.2
44	J-8	598.00	<Collection: 1 items>	8,000	796.32	85.8
46	J-9	598.00	<Collection: 1 items>	375	796.32	85.8
48	J-10	598.00	<Collection: 1 items>	21,875	796.33	85.8
50	J-11	598.00	<Collection: 1 items>	4,000	796.32	85.8
52	J-12	598.00	<Collection: 1 items>	0	796.32	85.8
54	J-13	598.00	<Collection: 1 items>	4,000	796.32	85.8
56	J-14	598.00	<Collection: 1 items>	4,000	796.32	85.8
59	J-15	598.00	<Collection: 1 items>	13,125	796.33	85.8
61	J-16	594.00	<Collection: 1 items>	12,250	796.31	87.5
65	J-17	598.00	<Collection: 1 items>	7,000	796.35	85.8
67	J-18	597.00	<Collection: 1 items>	10,500	796.37	86.3
69	J-19	598.00	<Collection: 1 items>	9,625	796.41	85.8
71	J-20	600.00	<Collection: 1 items>	7,000	796.46	85.0
73	J-21	598.00	<Collection: 1 items>	6,125	796.36	85.8
78	J-23	600.00	<Collection: 1 items>	92,500	796.43	85.0
80	J-24	601.00	<Collection: 1 items>	66,614	796.96	84.8
82	J-25	601.00	<Collection: 1 items>	110,521	797.20	84.9
84	J-26	603.00	<Collection: 1 items>	50,000	797.80	84.3
86	J-27	605.00	<Collection: 1 items>	0	798.23	83.6
88	J-28	600.00	<Collection: 1 items>	0	797.20	85.3
90	J-29	601.00	<Collection: 1 items>	18,500	797.07	84.8
92	J-30	600.00	<Collection: 1 items>	0	797.31	85.4
94	J-31	600.00	<Collection: 1 items>	2,000	797.40	85.4
96	J-32	601.00	<Collection: 1 items>	2,000	797.40	85.0
98	J-33	601.00	<Collection: 1 items>	66,614	797.22	84.9
101	J-34	601.00	<Collection: 1 items>	4,000	797.59	85.1
103	J-35	601.00	<Collection: 1 items>	4,000	797.59	85.1
105	J-36	602.00	<Collection: 1 items>	375	797.76	84.7
107	J-37	602.00	<Collection: 1 items>	4,000	797.82	84.7
109	J-38	603.00	<Collection: 1 items>	4,000	797.84	84.3
111	J-39	604.00	<Collection: 1 items>	4,000	797.90	83.9
113	J-40	604.00	<Collection: 1 items>	0	797.93	83.9
115	J-41	605.00	<Collection: 1 items>	0	798.26	83.6
117	J-42	603.00	<Collection: 1 items>	0	797.81	84.3
123	J-43	605.00	<Collection: 1 items>	0	798.38	83.7
125	J-44	605.00	<Collection: 1 items>	0	798.38	83.7
127	J-45	604.00	<Collection: 1 items>	(N/A)	(N/A)	(N/A)
133	J-46	601.00	<Collection: 1 items>	0	798.23	85.3

**Active Scenario: Peak Hour - North Forest On
FlexTable: Junction Table**

Current Time: 0.000 hours

ID	Label	Elevation (ft)	Demand Collection	Demand (gpd)	Hydraulic Grade (ft)	Pressure (psi)
134	J-47	602.00	<Collection: 1 items>	0	798.23	84.9
136	J-48	603.00	<Collection: 1 items>	0	798.23	84.5
138	J-49	604.00	<Collection: 1 items>	0	798.23	84.0
141	J-50	605.00	<Collection: 1 items>	0	798.23	83.6
162	J-54	595.27	<Collection: 1 items>	7,875	796.31	87.0
171	J-57	601.00	<Collection: 1 items>	0	798.23	85.3
173	J-58	601.00	<Collection: 1 items>	0	798.23	85.3
176	J-59	595.00	<Collection: 1 items>	0	796.31	87.1
187	J-62	599.00	<Collection: 1 items>	0	796.31	85.4
216	J-65	602.00	<Collection: 1 items>	4,000	797.79	84.7

**Active Scenario: Peak Hour - North Forest On
FlexTable: Pipe Table**

Current Time: 0.000 hours

ID	Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Hazen- Williams C	Flow (gpd)	Velocity (ft/s)	Headloss Gradient (ft/ft)
30	P-1	589	J-1	J-2	8.0	120.0	-2	0.00	0.000
36	P-5	420	J-2	J-4	8.0	120.0	-14,601	0.06	0.000
38	P-6	461	J-2	J-5	8.0	120.0	-260	0.00	0.000
40	P-7	126	J-5	J-6	8.0	120.0	1	0.00	0.000
42	P-8	516	J-5	J-7	8.0	120.0	-10,261	0.05	0.000
43	P-9	458	J-7	J-4	8.0	120.0	-8,014	0.04	0.000
45	P-10	1,094	J-7	J-8	8.0	120.0	-17,247	0.08	0.000
47	P-11	174	J-8	J-9	8.0	120.0	-29,247	0.13	0.000
49	P-12	396	J-9	J-10	8.0	120.0	-37,622	0.17	0.000
51	P-13	275	J-8	J-11	8.0	120.0	4,000	0.02	0.000
53	P-14	114	J-9	J-12	8.0	120.0	8,000	0.04	0.000
55	P-15	152	J-12	J-13	8.0	120.0	4,000	0.02	0.000
57	P-16	148	J-12	J-14	8.0	120.0	4,000	0.02	0.000
58	P-17	981	J-4	J-10	8.0	120.0	-32,225	0.14	0.000
60	P-18	311	J-10	J-15	8.0	120.0	-20,847	0.09	0.000
63	P-20	307	J-16	J-4	8.0	120.0	10,516	0.05	0.000
64	P-21	926	J-16	J-15	8.0	120.0	-35,032	0.16	0.000
66	P-22	271	J-15	J-17	8.0	120.0	-69,004	0.31	0.000
68	P-23	371	J-17	J-18	8.0	120.0	-51,392	0.23	0.000
70	P-24	721	J-18	J-19	8.0	120.0	-61,892	0.27	0.000
72	P-25	550	J-19	J-20	8.0	120.0	-71,517	0.32	0.000
74	P-26	642	J-20	J-21	8.0	120.0	101,611	0.45	0.000
75	P-27	363	J-21	J-10	8.0	120.0	70,874	0.31	0.000
76	P-28	516	J-17	J-21	8.0	120.0	-24,612	0.11	0.000
79	P-29	181	J-20	J-23	8.0	120.0	92,500	0.41	0.000
81	P-30	519	J-20	J-24	8.0	120.0	-272,628	1.21	0.001
83	P-31	385	J-24	J-25	8.0	120.0	-214,971	0.95	0.001
85	P-32	597	J-25	J-26	8.0	120.0	-276,156	1.22	0.001
87	P-33	413	J-26	J-27	8.0	120.0	-286,484	1.27	0.001
89	P-34	195	J-25	J-28	8.0	120.0	1	0.00	0.000
91	P-35	491	J-24	J-29	8.0	120.0	-124,271	0.55	0.000
93	P-36	795	J-29	J-30	8.0	120.0	-142,771	0.63	0.000
95	P-37	108	J-30	J-31	8.0	120.0	-258,722	1.15	0.001
97	P-38	363	J-31	J-32	8.0	120.0	2,000	0.01	0.000
99	P-39	493	J-25	J-33	8.0	120.0	-49,337	0.22	0.000
100	P-40	419	J-33	J-30	8.0	120.0	-115,951	0.51	0.000
102	P-41	210	J-31	J-34	8.0	120.0	-262,722	1.16	0.001
104	P-42	372	J-34	J-35	8.0	120.0	4,000	0.02	0.000
106	P-43	179	J-34	J-36	8.0	120.0	-270,722	1.20	0.001
110	P-45	186	J-37	J-38	8.0	120.0	-97,039	0.43	0.000
112	P-46	378	J-38	J-39	8.0	120.0	-101,039	0.45	0.000
114	P-47	145	J-39	J-40	8.0	120.0	-105,039	0.47	0.000
116	P-48	244	J-40	J-41	8.0	120.0	-326,769	1.45	0.001
118	P-49	114	J-36	J-42	8.0	120.0	-182,058	0.81	0.000

**Active Scenario: Peak Hour - North Forest On
FlexTable: Pipe Table**

Current Time: 0.000 hours

ID	Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Hazen- Williams C	Flow (gpd)	Velocity (ft/s)	Headloss Gradient (ft/ft)
119	P-50	167	J-42	J-40	8.0	120.0	-221,730	0.98	0.001
120	P-51	725	J-26	J-42	8.0	120.0	-39,672	0.18	0.000
124	P-52	967	J-41	J-43	16.0	130.0	-613,255	0.68	0.000
126	P-53	183	J-43	J-44	16.0	110.0	1	0.00	0.000
131	P-55	167	J-45	R-2	6.0	130.0	(N/A)	(N/A)	(N/A)
132	P-56	718	J-27	J-41	16.0	130.0	-286,486	0.32	0.000
135	P-57	201	J-46	J-47	6.0	130.0	-1	0.00	0.000
137	P-58	192	J-47	J-48	6.0	130.0	-1	0.00	0.000
139	P-59	432	J-48	J-49	6.0	130.0	-1	0.00	0.000
142	P-61	492	J-49	J-50	8.0	130.0	-2	0.00	0.000
143	P-62	143	J-50	J-27	12.0	130.0	-2	0.00	0.000
163	P-63	427	J-2	J-54	8.0	120.0	-4,391	0.02	0.000
164	P-64	747	J-54	J-16	8.0	120.0	-12,266	0.05	0.000
170	P-65	800	R-3	PMP-1	24.0	130.0	-1	0.00	0.000
172	P-66	120	PMP-1	J-57	6.0	130.0	-1	0.00	0.000
174	P-67	181	J-57	J-58	8.0	130.0	-1	0.00	0.000
175	P-68	577	J-58	J-49	8.0	130.0	-1	0.00	0.000
188	P-75	407	J-1	J-62	8.0	130.0	1	0.00	0.000
205	P-84	39	R-5	J-45	8.0	110.0	(N/A)	(N/A)	(N/A)
207	P-85	35	J-43	PMP-3	16.0	110.0	-613,256	0.68	0.000
208	P-86	331	PMP-3	R-5	24.0	110.0	-613,256	0.30	0.000
212	P-87	3,113	J-62	J-59	8.0	130.0	1	0.00	0.000
214	P-88	443	J-1	PMP-4	8.0	120.0	1	0.00	0.000
215	P-89	64	PMP-4	R-4	24.0	130.0	1	0.00	0.000
217	P-90	230	J-36	J-65	8.0	120.0	-89,039	0.39	0.000
218	P-91	193	J-65	J-37	8.0	120.0	-93,039	0.41	0.000

Length (User
Defined)
(ft)

0
0
0
0
0
0
0
0
0
0
0
0
0
0
0
0
0
0
0
0
0
0
0

**Active Scenario: Peak Hour - North Forest On
FlexTable: Pipe Table**

Current Time: 0.000 hours

Length (User Defined) (ft)
0
250
0
0
0
1
0
0
1
0
0

Active Scenario: Peak Hour - North Forest On
FlexTable: Pump Table

Current Time: 0.000 hours

ID	Label	Elevation (ft)	Pump Definition	Status (Initial)	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpd)	Pump Head (ft)
169	PMP-1	601.00	Sunrise/Sheridan	Off	600.50	798.23	0	0.00
206	PMP-3	604.92	North Forest	On	605.50	798.39	613,256	192.89
213	PMP-4	598.00	Donna Lee	Off	598.00	796.31	0	0.00

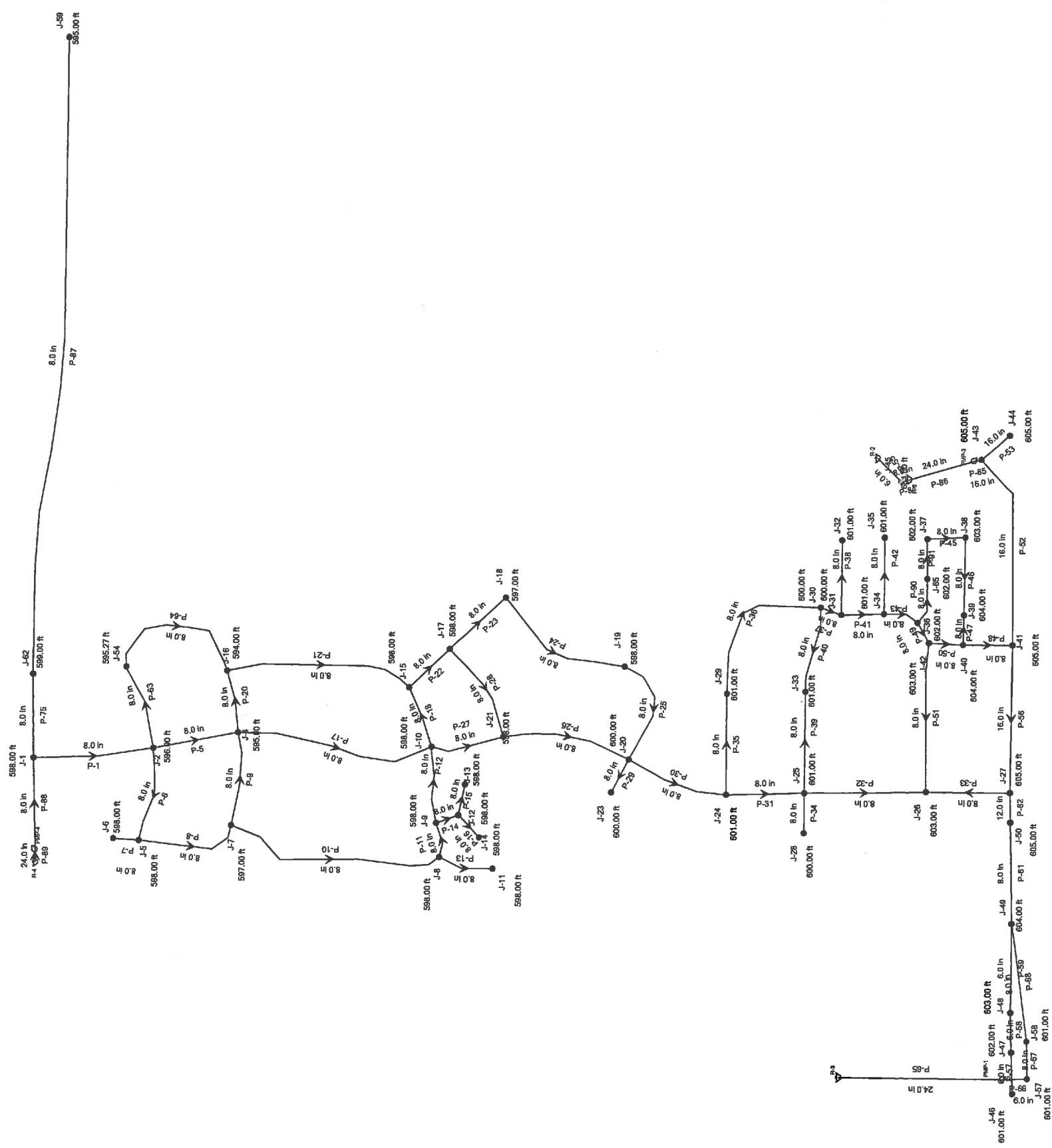
**Active Scenario: Peak Hour - North Forest On
FlexTable: Reservoir Table**

Current Time: 0.000 hours

ID	Label	Elevation (ft)	Zone	Flow (Out net) (gpd)	Hydraulic Grade (ft)
130	R-2	0.00	<None>	(N/A)	(N/A)
168	R-3	600.50	<None>	-1	600.50
200	R-4	598.00	<None>	-1	598.00
203	R-5	605.50	<None>	613,256	605.50

APPENDIX F
Hydrant Model Layout

Active Scenario: Max Day Fire Flow - Maple On, Middle
Scenario: Max Day Fire Flow - Maple On, Middle



PCE

PRELIMINARY DRAINAGE ANALYSIS REPORT

FOR

WESTWOOD MIXED USE NEIGHBORHOOD PROJECT

772 NORTH FOREST ROAD

TOWN OF AMHERST, ERIE COUNTY, NEW YORK

MAY 19, 2014

**Prepared By: Timothy M. Lavocat, P.E., CFM
*PROFESSIONAL CIVIL ENGINEERING, L.L.C.***

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PCE PROJECT NO. 1402

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 - 4.1 Post -Development Conditions
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1.0 INTRODUCTION:

Mensch Capital Partners, LLC (“Project Sponsor”) is proposing to develop a 174.94 +/- acre site located at 772 North Forest Road in the Town of Amherst, Erie County, New York (See Figure 1). The 174.94 +/- acre site is currently the privately owned and operated Westwood Country Club and Golf Course. The project site is bounded by Maple Road to the north, Frankhauser Road to the west, Sheridan Drive to the south and North Forest Road, Ellicott Creek and Audubon Par 3 Golf Course to the east. The proposed mixed use neighborhood consists of Westwood Commons (Office, Residential, Hotel, Event Space, Neighborhood Business and the existing Clubhouse) and Westwood Residential (Single Family Residential, Patio Homes, Townhomes and Senior Living) (See Figure 2).

The purpose of this Preliminary Drainage Report is to identify and evaluate the preliminary stormwater impacts as part of the environmental review of the proposed project pursuant to the State Environmental Quality Review Act (“SEQRA”) including the Draft Generic Environmental Impact Statement (“DGEIS”) being submitted on behalf of the Project Sponsor. This analysis specifically analyzes the pre development and post development conditions and associated storm water management storage volume requirements for the proposed development under the 1-year, 10-year and 100-year storms.

This preliminary drainage analysis includes delineation of both pre-development and post-development drainage areas and performing hydrologic calculations for the 1-year, 10-year and 100-year storm events in accordance with United States Environmental Protection Agency (“EPA”) and New York State Department of Environmental Conservation (“NYSDEC”) Stormwater Regulatory Requirements.

2.0 ANALYSIS METHODOLOGY:

This analysis was performed utilizing HydroCad Stormwater Modeling System Version 10.00-11. HydroCad utilizes hydrology techniques developed by the Soil Conservation Service (“SCS”) and specifically techniques and procedures derived from Technical Release 20 (“TR-20”) “Computer Program for Project Formulation Hydrology” and Technical Release 55 (“TR-55”) “Urban Hydrology for Small Watersheds”.

The 174.94 +/- acre total hydrologic area was delineated down into smaller Drainage Areas (DA’s) for modeling and analysis. The DA boundaries, times of concentration paths and lengths were determined from topographic information with a 2’ contour interval. Aerial mapping was utilized to determine land use (to determine runoff curve numbers (CN’s)) and the site soils were determined from the USDA Web Soil Survey.

3.0 PRE-DEVELOPMENT DRAINAGE ANALYSIS:

3.1 *Pre-Development Conditions:*

The Project Site is currently the Westwood Country Club and Golf Course. The golf course exhibits the characteristics common to golf courses in Western New York with a series of interconnected small ponds and swales. The topography of the site varies and is generally flat with some isolated areas of moderate slope. The site primarily slopes to the east and northeast towards Ellicott Creek.

The eastern portion of the site is located within the 100-year floodplain of Ellicott Creek. The 100-year base flood elevation of Ellicott Creek varies from 596 at the south end of the site to 594 at the north end of the site.

The majority of the project site is hydrologically contained within the boundaries of the Project Site. The only off-site drainage areas flowing onto the Project Site consist of the rear yards of the adjacent properties on Frankhauser Road and also the rear yards of the adjacent properties on Maple Road. No other significant off-site flows are known to impact this property.

The site soils are all of Hydrologic Soil Group D. The soil types and associated acreages are as follows:

AREA	SOIL TYPE
74.57 Acres	Odessa (Od)
31.98 Acres	Schoharie (SaA) (SaB)
30.05 Acres	Claverack (CrA)
24.71 Acres	Cosad (Cv)
9.46 Acres	Teel (Te)
4.17 Acres	Lakemont (La)
174.94 Acres	TOTAL

3.2 **Drainage Areas:**

The pre-development Project Site consists of six (6) delineated Drainage Areas (DA's) numbered DA1 through DA6. A brief description of each is as follows:

DA-1

Consists of 21.26 acres and is located in the northern portion of the site. DA1 discharges primarily via sheet flow east towards the Audubon Par 3 Golf Course at Outlet 1.

DA-2

Consists of 55.16 acres and is located in the northeastern portion of the site. DA2 discharges primarily via sheet flow east towards the Audubon Par 3 Golf Course at Outlet 2.

DA-3

Consists of 22.32 acres and is located in the eastern center portion of the site. DA3 discharges primarily via sheet flow east directly towards Ellicott Creek at Outlet 3.

DA-4

Consists of 15.33 acres and is located in the southwestern portion of the site. DA4 discharges primarily via sheet flow west towards Frankhauser Road at Outlet 4.

DA-5

Consists of 14.36 acres and is located in southern portion of the site. DA5 discharges west primarily via sheet flow towards Frankhauser Road at Outlet 5.

DA-6

Consists of 46.51 acres and is located in the south eastern portion of the site. DA6 discharges east primarily via sheet flow directly towards Ellicott Creek at Outlet 6.

See Figure 3 – Existing Conditions Analysis Map for delineation of pre-development drainage areas.

3.3 Analysis Results (Pre-Development):

Each drainage area was analyzed for the 1, 10 and 100-year storm events under pre-development conditions to determine peak discharges. The results of the analyses are listed in the table below.

DRAINAGE AREA	1 YEAR (CFS)	10 YEAR (CFS)	100 YEAR (CFS)
DA1	8.45	24.20	40.80
DA2	17.72	51.08	86.29
DA3	9.63	27.56	46.44
DA4	5.69	16.33	27.61
DA5	3.97	11.44	19.35
DA6	20.52	54.44	89.32

Under existing (pre-development) conditions sheet flow runoff from DA1 and DA2 provides the Audubon Golf Course with substantial stormwater flow, DA3 and DA6 discharge directly into Ellicott Creek primarily via sheet flow and DA4 and DA5 discharge via sheet flow towards Frankhauser Road. All predevelopment flows are ultimately conveyed by various means to Ellicott Creek. There are three primary discharge areas under existing conditions. Stormwater sheet flow discharges to the Audubon Par 3 Golf Course, towards Frankhauser Road and directly to Ellicott Creek. Further modeling was performed to determine the maximum discharge to each of these three (3) areas. The contributing drainage area hydrographs were combined to calculate the pre-development discharges (CFS) to each of these areas and are summarized as follows:

	Offsite Sheet Flow Discharge To	1-Year	10-Year	100-Year
DA1 & DA2	Audubon Par 3 Golf Course	25.25	72.63	122.73
DA3 & DA6	Frankhauser Road	29.68	80.61	133.46
DA4 & DA5	Ellicott Creek	8.98	25.97	43.94
TOTAL		63.91	179.21	300.13

The total 1-year, 10-year and 100-year discharge values represent the maximum discharges allowable from the Project Site under developed conditions for these specific storm events. These maximum values are also used to determine stormwater storage volume requirement estimates under developed conditions. The methodology and determination of maximum discharges for these specific storm events are in compliance with the NYSDEC General Permit for Stormwater Discharges from Construction Activity (GP-0-10-001) and New York State Stormwater Design Manual.

4.0 POST-DEVELOPMENT DRAINAGE ANALYSIS:

4.1 Post-Development Conditions:

The proposed mixed use neighborhood consists of Westwood Commons (Office, Residential, Hotel, Event Space, Neighborhood Business and the existing Clubhouse) and Westwood Residential (Single Family Residential, Patio Homes, Townhomes and Senior Living).

The topography of the Project Site will be altered as a result of the development of the proposed mixed use neighborhood. The placement of earthen fill within the 100-year floodplain of Ellicott Creek along the eastern portion of the project is proposed. The placement of earthen fill within the floodplain of Ellicott Creek will require a Letter of Map Revision Based on Fill (“LOMR-F”) to be obtained from the Federal Emergency Management Agency (“FEMA”). The LOMR-F is a revision and modification to the effective Flood Insurance Rate Map (“FIRM”) as the result of fill placement within the floodplain of Ellicott Creek. The LOMR-F process includes a technical data submission to FEMA, review, concurrence and approval. The Town of Amherst Floodplain Administrator will also review and comment on the LOMR-F technical data submitted to FEMA. The incorporation of fill into the 100-year floodplain will ultimately remove this portion of the Project Site from the 100 year floodplain.

Stormwater flows that currently discharge towards Frankhauser Road will be conveyed to the east during the development of this project. The post development analysis determined that existing DA4 and DA5 will be incorporated into a larger post development drainage area and conveyed to the east, ultimately to Ellicott Creek.

Stormwater management ponds and a lake have been incorporated into the Conceptual Master Plan for the mixed use neighborhood project in recognition of the fact that it will be necessary to provide on-site areas to detain stormwater runoff resulting from the alteration of the site topography and inclusion of new impervious surfaces. These hydraulic structures will be designed to ensure compliance with applicable stringent stormwater quality standards by providing stormwater storage to limit the discharge from the project to pre development discharge rates, or less. The detailed design of all stormwater outfall structures will include and account for the effects of the tailwater elevations (1, 10 and 100 year flood elevations) of Ellicott Creek.

4.2 Drainage Areas:

The post-development project site consists of four (4) delineated Post-development Drainage Areas (PDA's) numbered PDA-1 through PDA-4. A brief description of each is as follows:

PDA-1

Consists of 57.34 acres and is located in the northern portion of the site. There are three (3) stormwater management ponds located within PDA-1 which will provide the required stormwater detention. PDA-1 stormwater discharge will ultimately be conveyed to the large stormwater management lake and ultimately to Ellicott Creek.

PDA-4

Consists of 86.20 acres and consists of the majority of the southern portion of the project site. PDA-2 discharges east into a large stormwater management lake and ultimately to Ellicott Creek.

PDA-3

Consists of 20.54 acres and is located in the extreme southeastern portion of the site. PDA-3 discharges to a stormwater management pond and ultimately to Ellicott Creek.

PDA-4

Consists of 10.86 acres and is located immediately adjacent to Ellicott Creek. PDA-4 discharges directly to Ellicott Creek. There is no proposed development within PDA-4.

See Figure 4 - Proposed Conditions Analysis Map for delineation of post-development drainage areas.

4.3 Analysis Results (Post-Development):

Each drainage area was analyzed for the 1, 10 and 100-year storm events under post-development conditions to determine peak discharges. The results of the analyses are listed in the table below.

DRAINAGE AREA	1 YEAR (CFS)	10 YEAR (CFS)	100 YEAR (CFS)
PDA-1	42.30	90.02	135.46
PDA-2	73.63	148.29	218.13
PDA-3	15.54	34.93	53.74
PDA-4	6.62	18.60	31.13

The post development stormwater discharge from PDA-1 will be conveyed to the stormwater management lake via a stormwater pumping station and ultimately to Ellicott Creek. No post development stormwater discharge will be conveyed to the Audubon Par 3 Golf Course. A rear yard drainage system will be installed within the rear yards of the lots adjacent to the Audubon Par 3 Golf Course to further ensure that no post development discharge is conveyed to the Audubon Par 3 Golf Course.

PDA-2 is proposed to be tributary to a large stormwater management lake. The outfall from this lake will discharge to Ellicott Creek.

PDA-3 will be contained and managed within a small stormwater management pond and ultimately discharge to Ellicott Creek.

PDA-4 will directly discharge to Ellicott Creek as it currently does under pre-development conditions.

Allowable discharges were determined for each PDA based on the pre-development analysis. The discharges were based on the allowable discharge rates and **general** outlet locations as determined under the pre-development analysis. Allowable discharges under the post-developed condition for each PDA are as follows:

	1-Year	10-Year	100-Year	NOTE
PDA-1	25.25	72.63	122.73	1
PDA-2	30.84	70.78	114.27	2
PDA-3	1.2	17.2	32.0	3
PDA-4	6.62	18.60	31.13	4
TOTAL	63.91	179.21	300.13	

NOTES:

1. Based solely on pre-development discharge from DA1 and DA2. This stormwater discharge will be conveyed to the stormwater management lake via a stormwater pumping station.
2. Remaining allowable balance after subtraction of PDA-1, PDA-3 and PDA-4.
3. Based solely on providing 1 acre-feet of storage (max) for each analyzed storm event.
4. Based on existing discharge. No change to this drainage area under developed conditions.

The post-development conditions analysis demonstrates that offsite discharge rates will be equal to pre-development rates which ensures that the development of the mixed use neighborhood will not have any potentially significant off-site drainage impacts.

4.4 Storage Requirements:

Additional modeling was performed under the post-development condition to estimate the volume of stormwater storage required for each PDA. The results are as follows:

	1-Year	10-Year	100-Year	NOTE
	(acre-feet)	(acre-feet)	(acre-feet)	
PDA-1	1.35	0.80	0.40	1
PDA-2	3.10	5.10	6.30	2
PDA-3	1.0	1.0	1.0	3
PDA-4	N/A	N/A	N/A	
TOTAL	5.45	6.90	7.70	

NOTES:

1. **A storage volume of 1.35 acre-feet governs for PDA-1.** The largest storage volume of the storm events analyzed governs for each PDA. This analysis is based on three (3) stormwater management ponds in series and stormwater discharge being conveyed to the lake via a stormwater pump station at a rate equal to or less than predevelopment discharge rate. This controlled rate will then be conveyed through the lake to Ellicott Creek.
2. **A storage volume of 6.30 acre-feet governs for PDA-2.** The proposed lake provides this stormwater management storage volume at a depth of approximately 1.3 feet above the normal water elevation of the lake. The normal water elevation will be determined during the final design of the stormwater

management lake and detailed design of the project and will be designed based on the 100-year base flood elevation (596) at the proposed location of the lake.

3. **A storage volume of 1.0 acre-feet governs for PDA-3.** Based solely on providing 1 acre-feet of storage (max) for each analyzed storm event.

A minimum total storage volume of approximately 8.65 acre-feet is required.

5.0 RECOMMENDATIONS AND CONCLUSIONS:

The purpose of this Preliminary Drainage Analysis was to identify and evaluate the preliminary stormwater management requirements as part of the environmental review of the proposed mixed use neighborhood pursuant to SEQRA. The drainage analysis conducted by our firm specifically analyzed the pre-development and post-development conditions and associated storm water management storage volume requirements for the proposed mixed use project under the 1-year, 10-year and 100-year storm events.

The results of the analyses reveal that a minimum of approximately 8.65 acre feet (total) of stormwater storage is required for the proposed project and allocated as tabulated in Section 4.4 above, based on the storm events analyzed. This project will be designed to accommodate the required storage volumes on site in accordance with all applicable regulations and standards relative to stormwater management.

Detailed investigation and analysis will be required during final design to determine drainage conveyance patterns and capacities in PDA-1. The preliminary design decision is to incorporate a stormwater pump station in the area of the existing sheet flow discharge locations adjacent to the Audubon Par 3 Golf Course to convey stormwater flows to the stormwater management lake. The final pump station design parameters may result in more (or less) stormwater storage volumes in PDA1.

Detailed designs of stormwater outfall structures were not included as part of this Preliminary Drainage Analysis. This level of detail will be provided during final detailed stormwater management design of the project and will be based on the 1, 10 and 100 year flood elevations of Ellicott Creek at the various hydrologic and hydraulic design points for the project.

The flood elevation of Ellicott Creek, for the various design storm events will be a thoroughly analyzed design element during overall final stormwater management design for this project.

The proposed project will be designed and constructed in accordance with all applicable NYSDEC and EPA requirements and in accordance with the New York State Stormwater Management Design Manual.

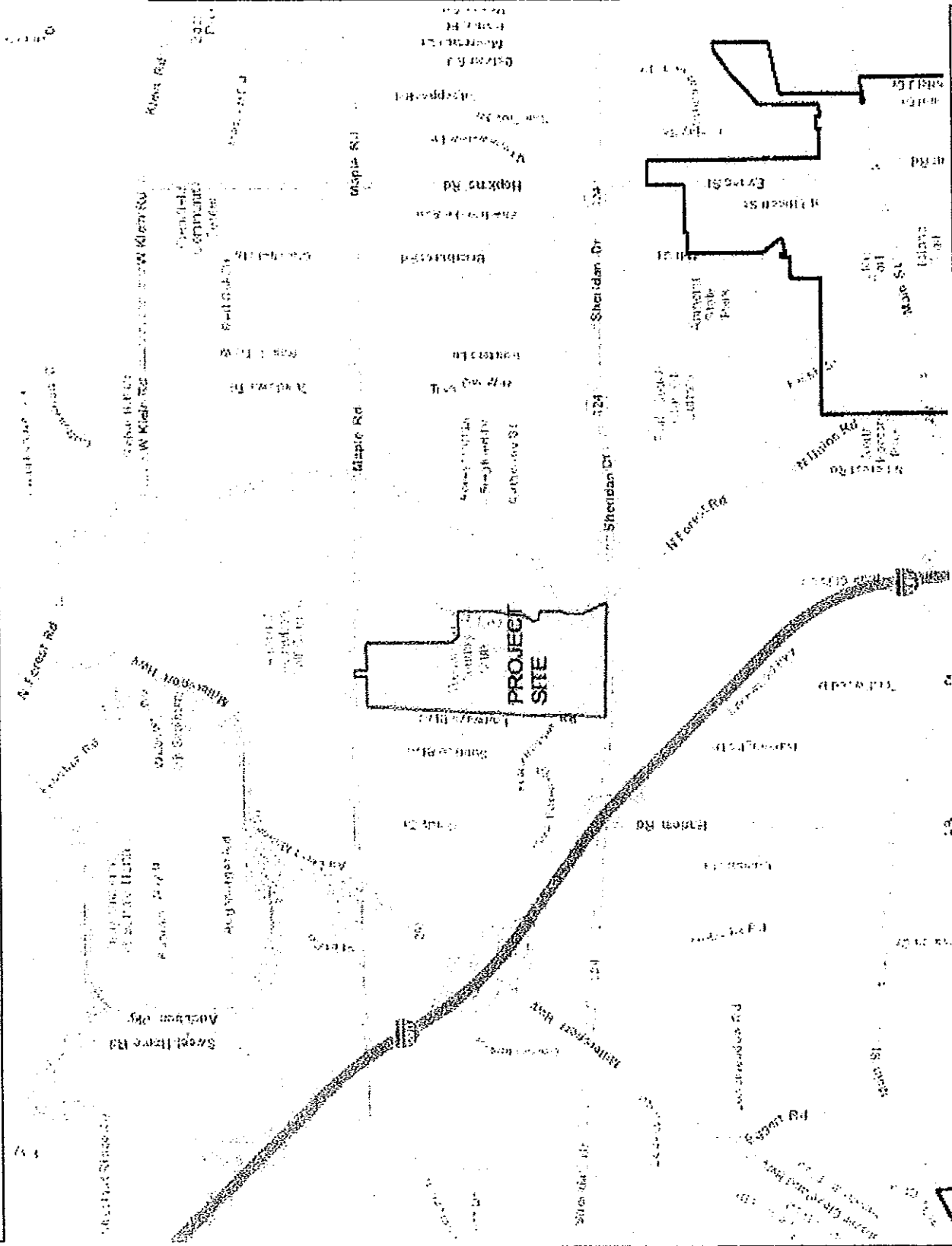
The Preliminary Drainage Analysis performed determined that adequate stormwater management features can and will be provided on site to adequately address the post development condition relative to all stormwater management requirements and regulations.

6.0 TECHNICAL QUESTIONS

Technical questions concerning data presented herein and/or the methods utilized for this study should be addressed to:

Timothy M. Lavocat, P.E., CFM
Manager
Professional Civil Engineering, LLC
8150 Salt Road
Clarence Center, New York 14032
716-583-6875

FIGURE 1 - PROJECT LOCATION MAP



Legend

□ Municipal Boundaries

0 3,713.00 7,426.00 Feet
 WGS_1984_Web_Mercator_Auxiliary_Sphere
 THIS MAP IS NOT TO BE USED FOR NAVIGATION

ERIE COUNTY
DEPARTMENT OF ENVIRONMENT & PLANNING
OFFICE OF GIS

This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.



1: 44,556

Figure 2



LEGEND:

WESTWOOD COMMONS:

- A. ■ OFFICE: 200,000 SQFT.
- B. ■ RESIDENTIAL: 150,000 SQFT
- C. ■ HOTEL: 130 KEYS
- D. ■ MULTI-FAMILY OVER NEIGHBORHOOD BUS/OFF: 325 UNITS
- E. □ LAKE EDGE TOWNHOMES / MULTI-FAMILY: 37 UNITS
- F. □ RIVER'S EDGE MULTI-FAMILY APARTMENTS: 40 UNITS
- G. ■ EVENT SPACE
- H. ■ EXISTING CLUBHOUSE

WESTWOOD RESIDENTIAL:

- I. □ PATIO HOME LOTS: 108 UNITS
- J. ■ LARGER LOTS - SINGLE FAMILY: 52 UNITS
- K. □ TOWNHOMES: 90 UNITS
- L. ■ SENIOR LIVING FACILITY ASSISTED LIVING 200 / INDEPENDENT 96

NOTES:

1. TOTAL PARKING COUNT IN THE WESTWOOD COMMONS AREA: 2,180 STALLS.
2. WESTWOOD PARKWAY WIDTH: 80 FT.
3. STANDARD ROADWAY WIDTH: 50 FT.

WESTWOOD

CONCEPTUAL MASTER PLAN

02/24/2014

AGREEMENT EXHIBIT "B"

MENSCH
Capital Partners, LLC

GOODY
CLANCY

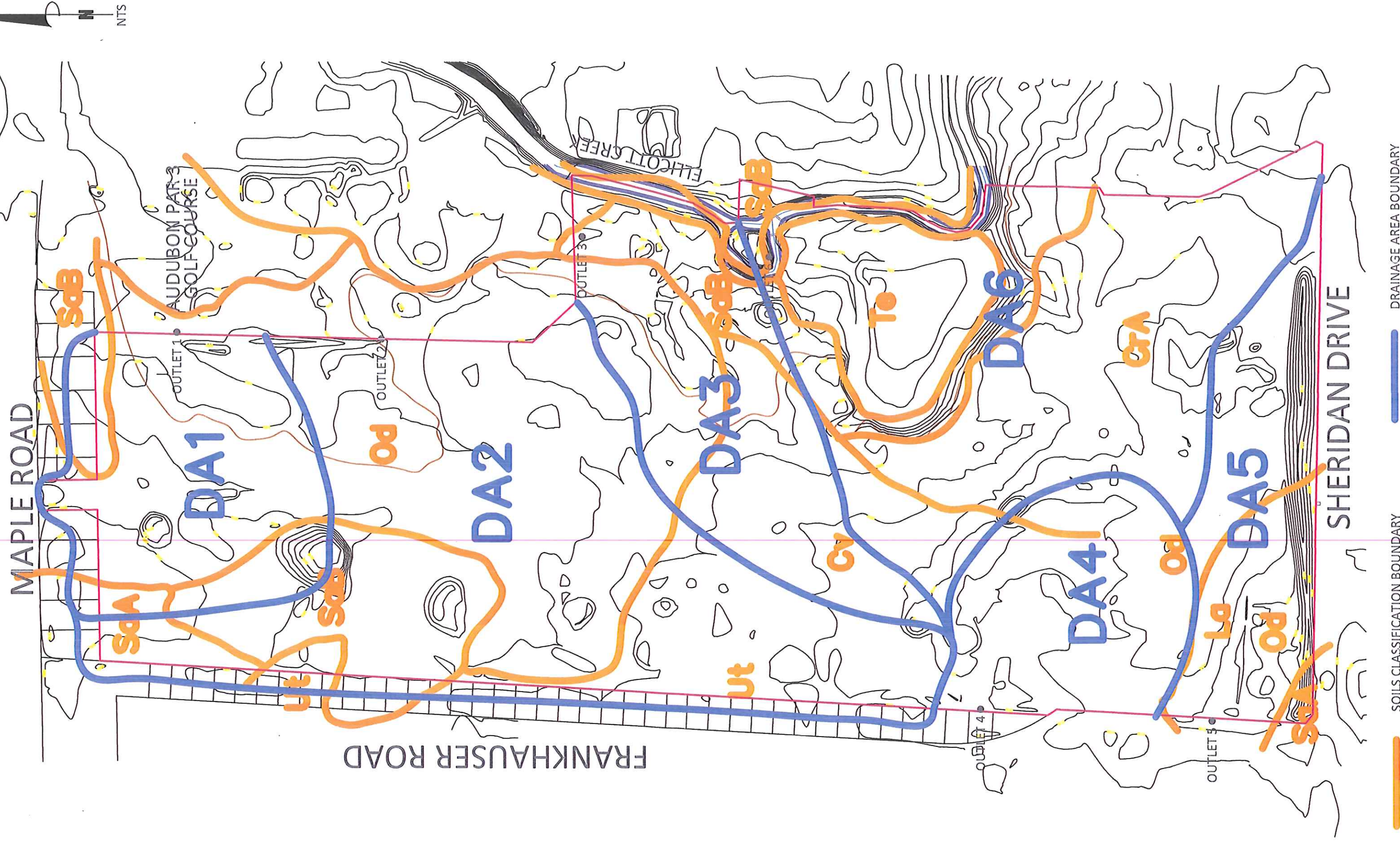
ARCHITECTURE
PLANNING
PRESERVATION

FONTANESE
FOLTS
AUBRECHT
ERNST
ARCHITECTS

Nussbaumer
& Clarke, Inc.
ENGINEERS AND SURVEYORS

FIGURE 3

EXISTING CONDITIONS ANALYSIS MAP



SOILS CLASSIFICATION BOUNDARY

DRAINAGE AREA BOUNDARY

FIGURE 4

PROPOSED CONDITIONS ANALYSIS MAP

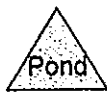
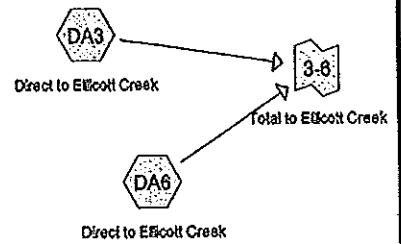
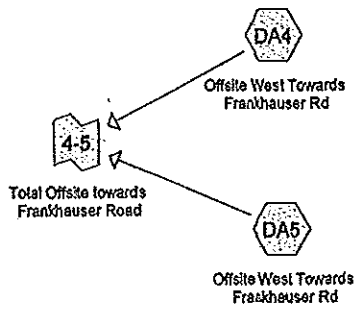
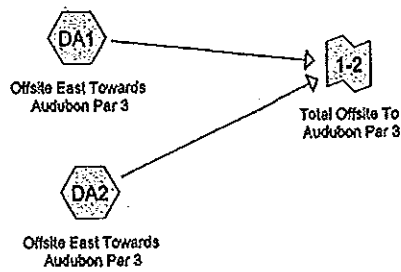


SHERIDAN DRIVE

DRAINAGE AREA BOUNDARY

APPENDIX A

PRE-DEVELOPMENT CALCULATIONS



Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
25.400	80	Claverack (CrA) - Open Space - Golf Course and Lawn, Good, HSG D (DA4, DA5, DA6)
4.650	98	Claverack (CrA) - Open Space - Imervlous - Pavement and Roof, HSG D (DA6)
24.710	80	Cosad (Cv) - Open Space - Golf Course and Lawn, Good, HSG D (DA2, DA3, DA4, DA6)
4.170	80	Lakemont (La) - Open Space - Golf Course and Lawn, Good, HSG D (DA5)
65.190	80	Odessa (Od) - Open Space - Golf Course and Lawn, Good, HSG D (DA1, DA2, DA3, DA4, DA5, DA6)
4.380	80	Schoharie (SaA) - Open Space - Golf Course and Lawn, Good, HSG D (DA1, DA2, DA5)
27.620	80	Schoharie (SaB) - Open Space - Golf Course and Lawn, Good, HSG D (DA1, DA2, DA3, DA6)
9.460	80	Teel (Te) - Open Space - Golf Course and Lawn, Good, HSG D (DA6)
9.380	80	Urban Odessa (Ut) - Open Space - Golf Course and Lawn, Good, HSG D (DA2)
174.940	80	TOTAL AREA

Westwood ProDevelopment

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Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
174.940	HSG D	DA1, DA2, DA3, DA4, DA5, DA6
0.000	Other	
174.940		TOTAL AREA

Westwood PreDevelopment

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Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover
0.000	0.000	0.000	25.400	0.000	25.400	Claverack (CrA) - Open Space - Golf Course and Lawn, Good
0.000	0.000	0.000	4.650	0.000	4.650	Claverack (CrA) - Open Space - Imervious - Pavement and Roof
0.000	0.000	0.000	24.710	0.000	24.710	Cosad (Cv) - Open Space - Golf Course and Lawn, Good
0.000	0.000	0.000	4.170	0.000	4.170	Lakemont (La) - Open Space - Golf Course and Lawn, Good
0.000	0.000	0.000	65.190	0.000	65.190	Odessa (Od) - Open Space - Golf Course and Lawn, Good
0.000	0.000	0.000	4.360	0.000	4.360	Schoharie (SaA) - Open Space - Golf Course and Lawn, Good
0.000	0.000	0.000	27.620	0.000	27.620	Schoharie (SaB) - Open Space - Golf Course and Lawn, Good
0.000	0.000	0.000	9.460	0.000	9.460	Teel (Te) - Open Space - Golf Course and Lawn, Good
0.000	0.000	0.000	9.380	0.000	9.380	Urban Odessa (Ut) - Open Space - Golf Course and Lawn, Good
0.000	0.000	0.000	174.940	0.000	174.940	TOTAL AREA

Westwood PreDevelopment

Type II 24-hr 1-Year Rainfall=2.10"

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Time span=5.00-30.00 hrs, dt=0.05 hrs, 501 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment DA1: Offsite East Towards Audubon Par 3 Runoff Area=21.260 ac 0.00% Impervious Runoff Depth=0.62"
Flow Length=870' Tc=40.6 min CN=80 Runoff=8.45 cfs 1.106 af

Subcatchment DA2: Offsite East Towards Audubon Par 3 Runoff Area=55.160 ac 0.00% Impervious Runoff Depth=0.62"
Flow Length=2,475' Tc=54.1 min CN=80 Runoff=17.72 cfs 2.870 af

Subcatchment DA3: Direct to Eillicott Creek Runoff Area=22.320 ac 0.00% Impervious Runoff Depth=0.62"
Flow Length=1,755' Tc=36.1 min CN=80 Runoff=9.63 cfs 1.161 af

Subcatchment DA4: Offsite West Towards Frankhauser Rd Runoff Area=15.330 ac 0.00% Impervious Runoff Depth=0.62"
Flow Length=1,155' Tc=44.5 min CN=80 Runoff=5.69 cfs 0.798 af

Subcatchment DA5: Offsite West Towards Frankhauser Rd Runoff Area=14.360 ac 0.00% Impervious Runoff Depth=0.62"
Flow Length=1,755' Tc=66.2 min CN=80 Runoff=3.97 cfs 0.747 af

Subcatchment DA6: Direct to Eillicott Creek Runoff Area=46.510 ac 10.00% Impervious Runoff Depth=0.72"
Flow Length=2,220' Tc=44.6 min CN=82 Runoff=20.52 cfs 2.773 af

Link 1-2: Total Offsite To Audubon Par 3 Inflow=25.25 cfs 3.976 af
Primary=25.25 cfs 3.976 af

Link 3-6: Total to Eillicott Creek Inflow=29.68 cfs 3.934 af
Primary=29.68 cfs 3.934 af

Link 4-5: Total Offsite towards Frankhauser Road Inflow=8.98 cfs 1.545 af
Primary=8.98 cfs 1.545 af

Total Runoff Area = 174.940 ac Runoff Volume = 9.455 af Average Runoff Depth = 0.65"
97.34% Pervious = 170.290 ac 2.66% Impervious = 4.650 ac

Summary for Subcatchment DA1: Offsite East Towards Audubon Par 3

Runoff = 8.45 cfs @ 12.41 hrs, Volume= 1.106 af, Depth= 0.62"

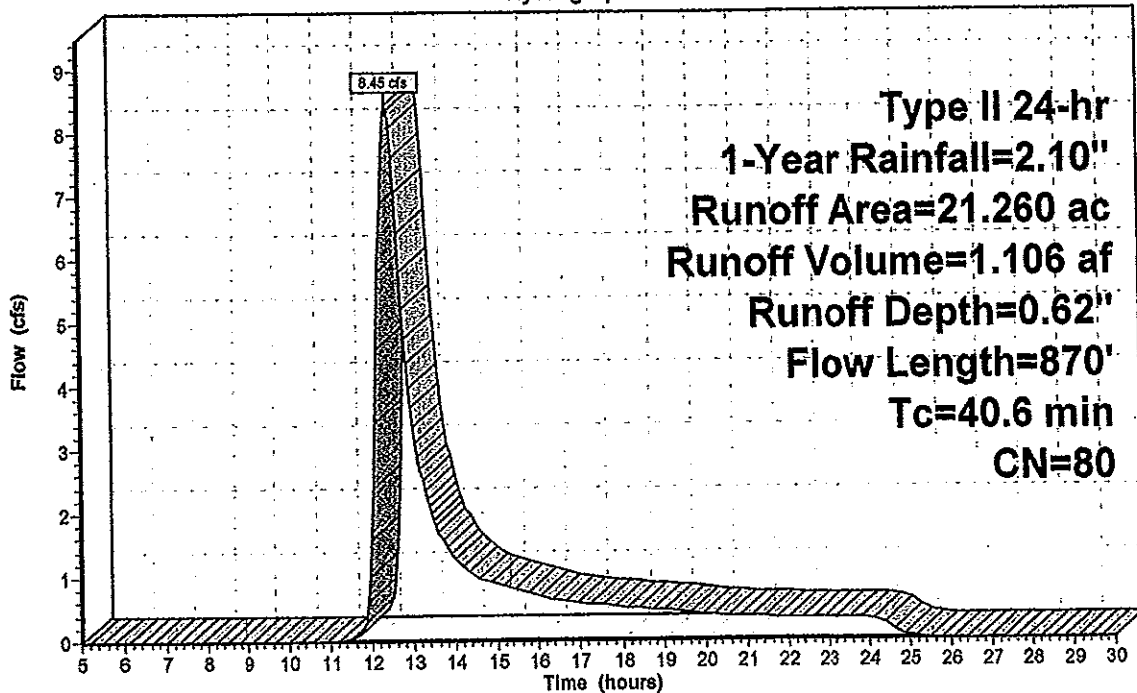
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-Year Rainfall=2.10"

Area (ac)	CN	Description
* 15.930	80	Odessa (Od) - Open Space - Golf Course and Lawn, Good, HSG D
* 4.330	80	Schoharie (SaB) - Open Space - Golf Course and Lawn, Good, HSG D
* 1.000	80	Schoharie (SaA) - Open Space - Golf Course and Lawn, Good, HSG D
21.260	80	Weighted Average
21.260		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
27.4	150	0.0047	0.09		Sheet Flow, A-B Grass: Short n= 0.150 P2= 2.50"
13.2	720	0.0032	0.91		Shallow Concentrated Flow, B-C Unpaved Kv= 16.1 fps
40.6	870	Total			

Subcatchment DA1: Offsite East Towards Audubon Par 3

Hydrograph



Summary for Subcatchment DA2: Offsite East Towards Audubon Par 3

Runoff = 17.72 cfs @ 12.60 hrs, Volume= 2.870 af, Depth= 0.62"

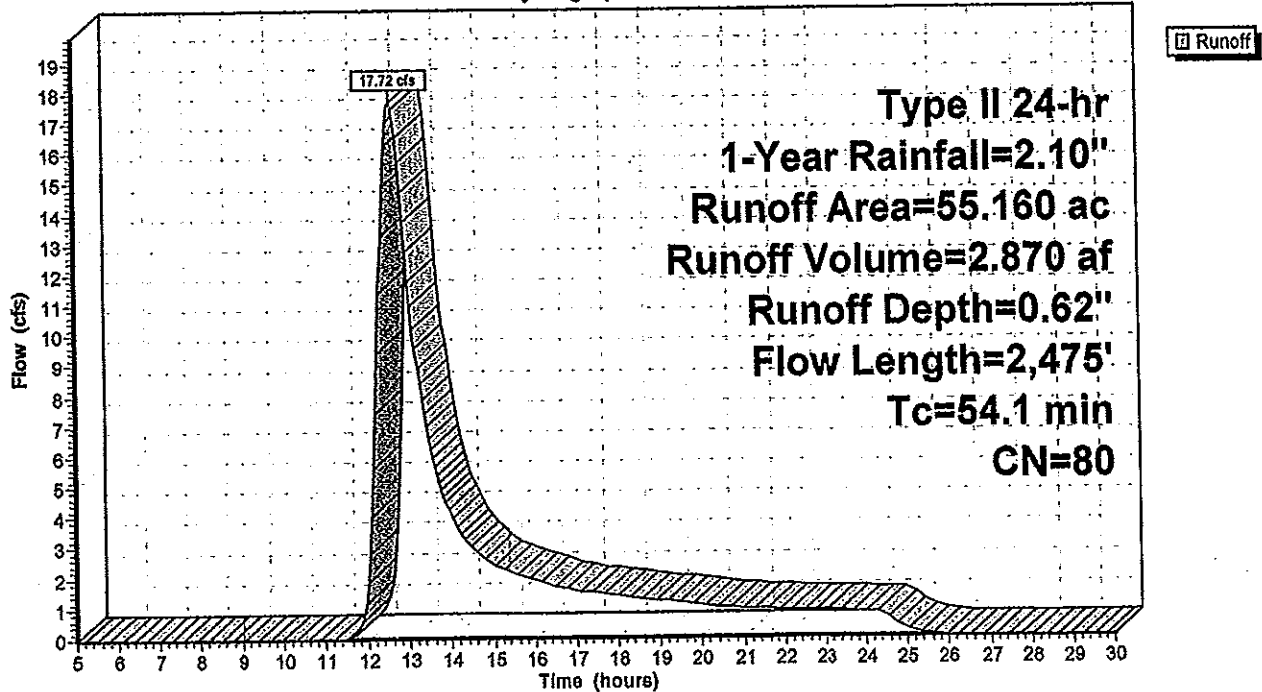
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-Year Rainfall=2.10"

Area (ac)	CN	Description
* 27.400	80	Odessa (Od) - Open Space - Golf Course and Lawn, Good, HSG D
* 9.150	80	Schoharie (SaB) - Open Space - Golf Course and Lawn, Good, HSG D
* 2.960	80	Schoharie (SaA) - Open Space - Golf Course and Lawn, Good, HSG D
* 9.380	80	Urban Odessa (Ut) - Open Space - Golf Course and Lawn, Good, HSG D
* 6.270	80	Cosad (Cv) - Open Space - Golf Course and Lawn, Good, HSG D
55.160	80	Weighted Average
55.160		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.5	150	0.0167	0.15		Sheet Flow, A-B Grass: Short n= 0.150 P2= 2.50"
37.6	2,325	0.0041	1.03		Shallow Concentrated Flow, B-C Unpaved Kv= 16.1 fps
54.1	2,475	Total			

Subcatchment DA2: Offsite East Towards Audubon Par 3

Hydrograph



Summary for Subcatchment DA3: Direct to Ellcott Creek

Runoff = 9.63 cfs @ 12.35 hrs, Volume= 1.161 af, Depth= 0.62"

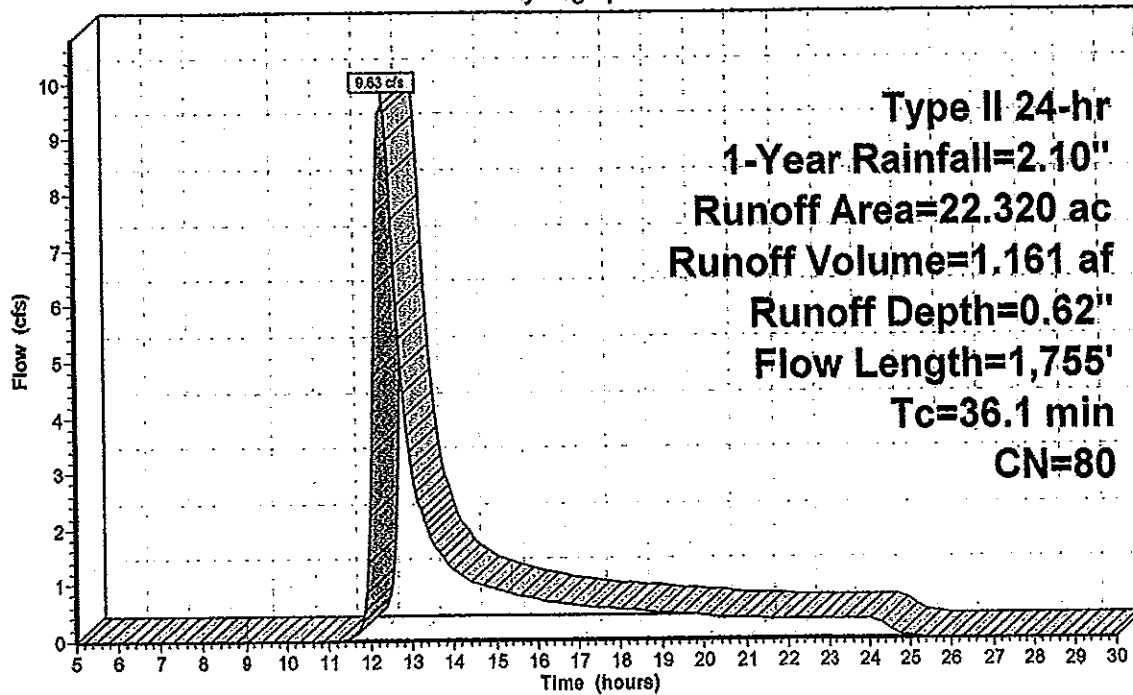
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-Year Rainfall=2.10"

Area (ac)	CN	Description
* 6.800	80	Odessa (Od) - Open Space - Golf Course and Lawn, Good, HSG D
* 5.830	80	Schoharie (SaB) - Open Space - Golf Course and Lawn, Good, HSG D
* 9.690	80	Cosad (Cv) - Open Space - Golf Course and Lawn, Good, HSG D
22.320	80	Weighted Average
22.320		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.5	150	0.0167	0.15		Sheet Flow, A-B Grass: Short n= 0.150 P2= 2.50"
19.6	1,605	0.0072	1.37		Shallow Concentrated Flow, B-C Unpaved Kv= 16.1 fps
36.1	1,755	Total			

Subcatchment DA3: Direct to Ellcott Creek

Hydrograph



Summary for Subcatchment DA4: Offsite West Towards Frankhauser Rd

Runoff = 5.69 cfs @ 12.47 hrs, Volume= 0.798 af, Depth= 0.62"

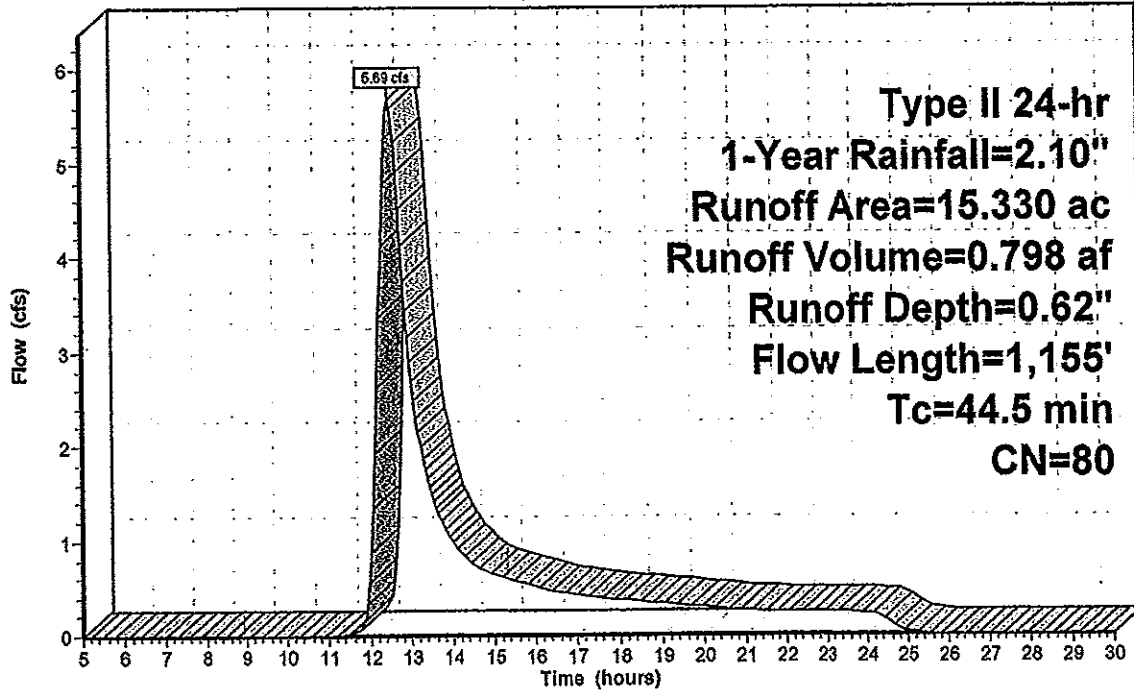
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-Year Rainfall=2.10"

Area (ac)	CN	Description
* 8.970	80	Odessa (Od) - Open Space - Golf Course and Lawn, Good, HSG D
* 1.530	80	Claverack (CrA) - Open Space - Golf Course and Lawn, Good, HSG D
* 4.830	80	Cosad (Cy) - Open Space - Golf Course and Lawn, Good, HSG D
15.330	80	Weighted Average
15.330		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
27.4	150	0.0047	0.09		Sheet Flow, A-B Grass: Short n= 0.150 P2= 2.50"
17.1	1,005	0.0037	0.98		Shallow Concentrated Flow, B-C Unpaved Kv= 16.1 fps
44.5	1,155	Total			

Subcatchment DA4: Offsite West Towards Frankhauser Rd

Hydrograph



Summary for Subcatchment DA5: Offsite West Towards Frankhauser Rd

Runoff = 3.97 cfs @ 12.76 hrs, Volume= 0.747 af, Depth= 0.62"

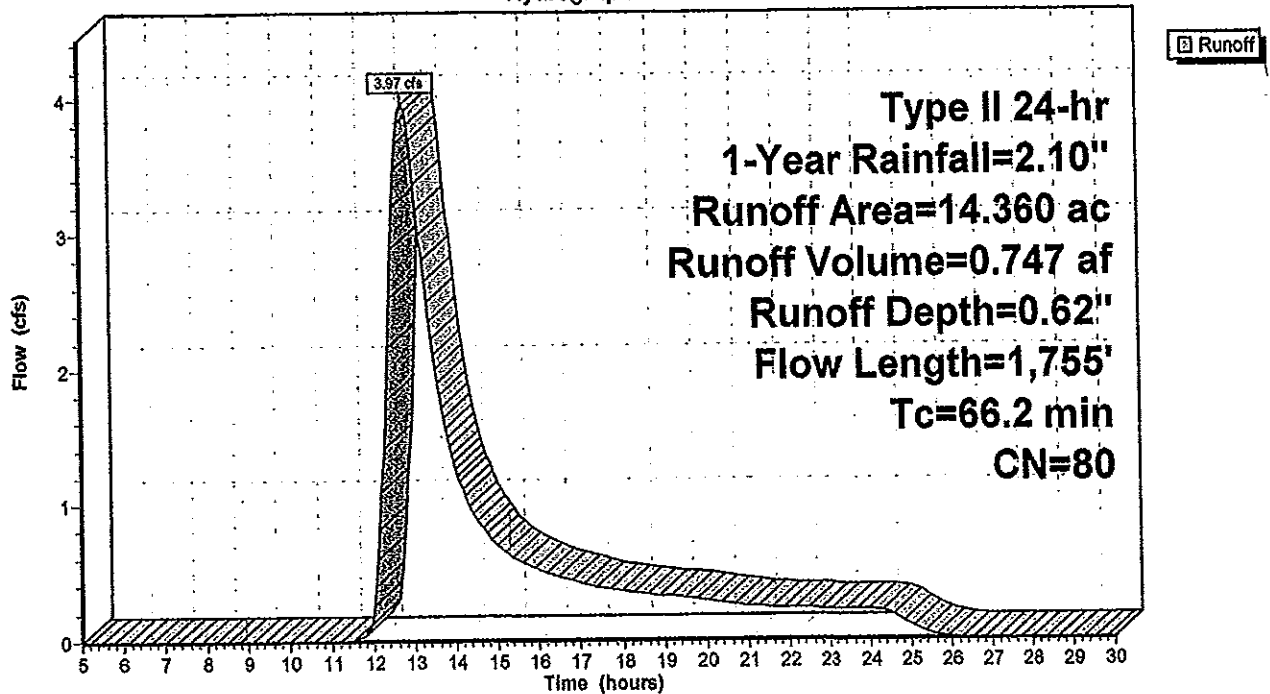
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-Year Rainfall=2.10"

Area (ac)	CN	Description
* 5.350	80	Odessa (Od) - Open Space - Golf Course and Lawn, Good, HSG D
* 0.400	80	Schoharie (SaA) - Open Space - Golf Course and Lawn, Good, HSG D
* 4.440	80	Claverack (CrA) - Open Space - Golf Course and Lawn, Good, HSG D
* 4.170	80	Lakemont (La) - Open Space - Golf Course and Lawn, Good, HSG D
14.360	80	Weighted Average
14.360		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
38.5	150	0.0020	0.06		Sheet Flow, A-B Grass: Short n= 0.150 P2= 2.50"
27.7	1,605	0.0036	0.97		Shallow Concentrated Flow, B-C Unpaved Kv= 16.1 fps
66.2	1,755	Total			

Subcatchment DA5: Offsite West Towards Frankhauser Rd

Hydrograph



Summary for Subcatchment DA6: Direct to Ellcott Creek

Runoff = 20.52 cfs @ 12.45 hrs, Volume= 2.773 af, Depth= 0.72"

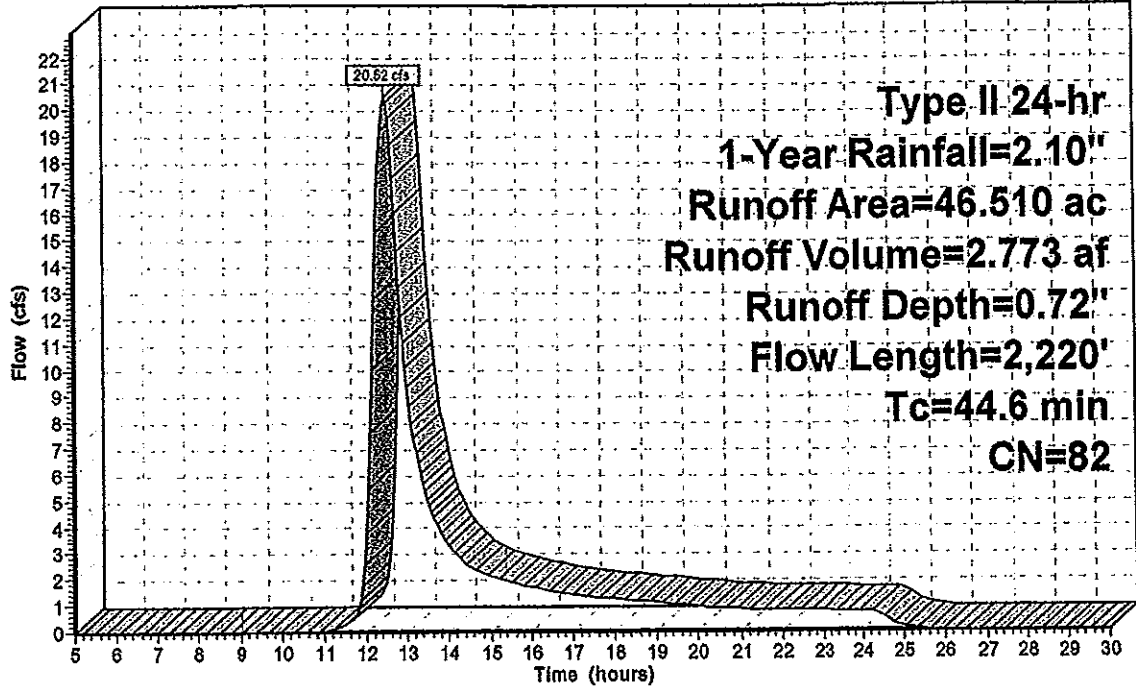
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-Year Rainfall=2.10"

Area (ac)	CN	Description
* 19.430	80	Claverack (CrA) - Open Space - Golf Course and Lawn, Good, HSG D
* 4.650	98	Claverack (CrA) - Open Space - Impervious - Pavement and Roof, HSG D
* 0.740	80	Odessa (Od) - Open Space - Golf Course and Lawn, Good, HSG D
* 8.310	80	Schoharie (SaB) - Open Space - Golf Course and Lawn, Good, HSG D
* 9.460	80	Teel (Te) - Open Space - Golf Course and Lawn, Good, HSG D
* 3.920	80	Cosad (Cv) - Open Space - Golf Course and Lawn, Good, HSG D
46.510	82	Weighted Average
41.860		90.00% Pervious Area
4.650		10.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.7	150	0.0140	0.14		Sheet Flow, A-B Grass: Short n= 0.150 P2= 2.50"
12.7	885	0.0052	1.16		Shallow Concentrated Flow, B-C Unpaved Kv= 16.1 fps
2.2	375	0.0320	2.88		Shallow Concentrated Flow, C-D Unpaved Kv= 16.1 fps
12.0	810	0.0049	1.13		Shallow Concentrated Flow, D-E Unpaved Kv= 16.1 fps
44.6	2,220	Total			

Subcatchment DA6: Direct to Ellicott Creek

Hydrograph



Runoff

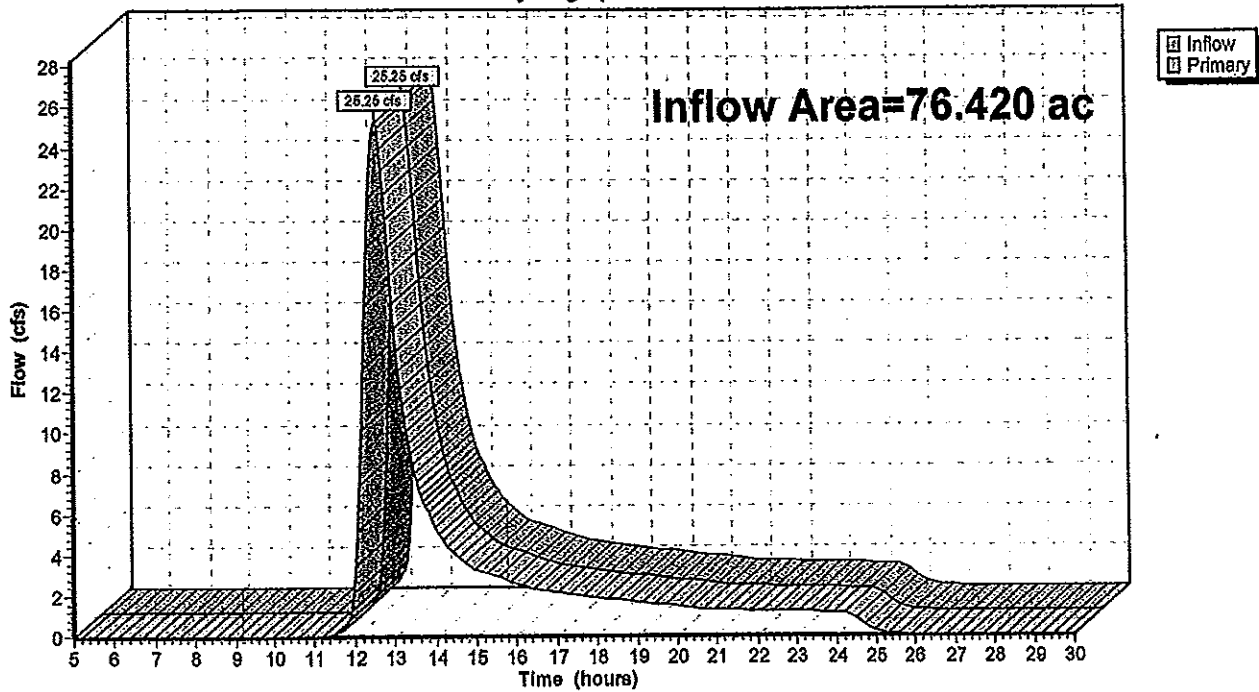
Summary for Link 1-2: Total Offsite To Audubon Par 3

Inflow Area = 76.420 ac, 0.00% Impervious, Inflow Depth = 0.62" for 1-Year event
Inflow = 25.25 cfs @ 12.53 hrs, Volume= 3.976 af
Primary = 25.25 cfs @ 12.53 hrs, Volume= 3.976 af, Atten=0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-30.00 hrs, dt= 0.05 hrs

Link 1-2: Total Offsite To Audubon Par 3

Hydrograph



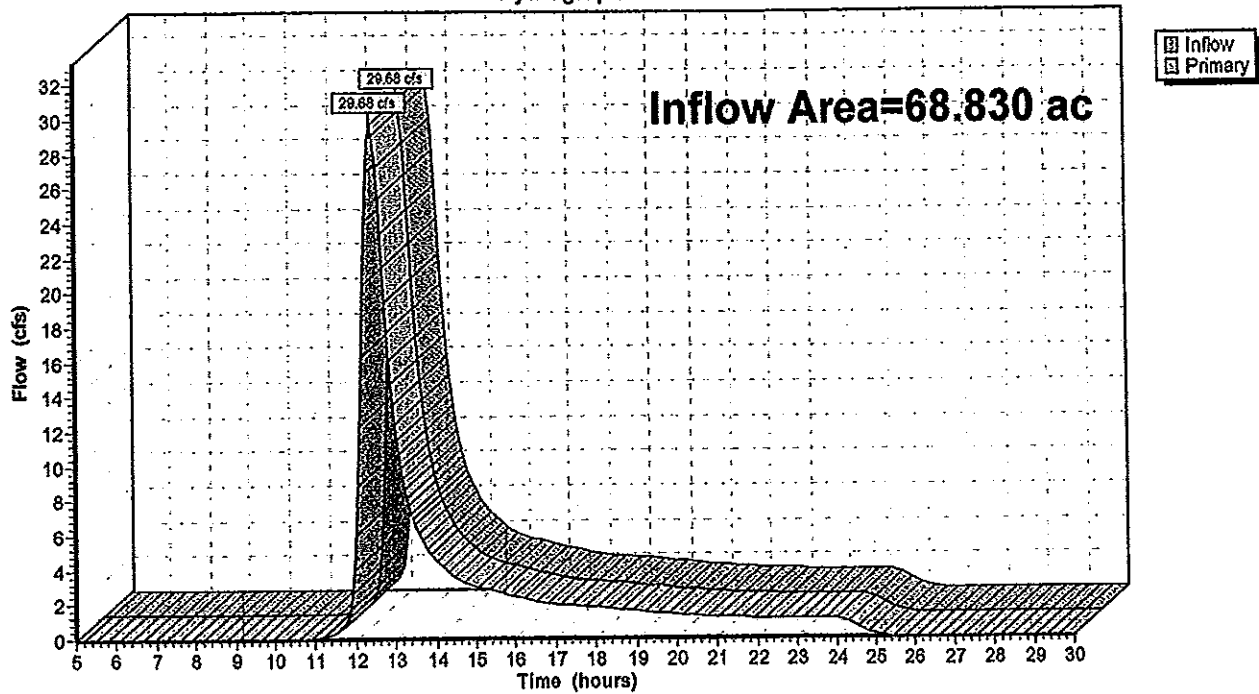
Summary for Link 3-6: Total to Ellcott Creek

Inflow Area = 68.830 ac, 6.76% Impervious, Inflow Depth = 0.89" for 1-Year event
Inflow = 29.68 cfs @ 12.42 hrs, Volume= 3.934 af
Primary = 29.68 cfs @ 12.42 hrs, Volume= 3.934 af, Atten=0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-30.00 hrs, dt= 0.05 hrs

Link 3-6: Total to Ellcott Creek

Hydrograph

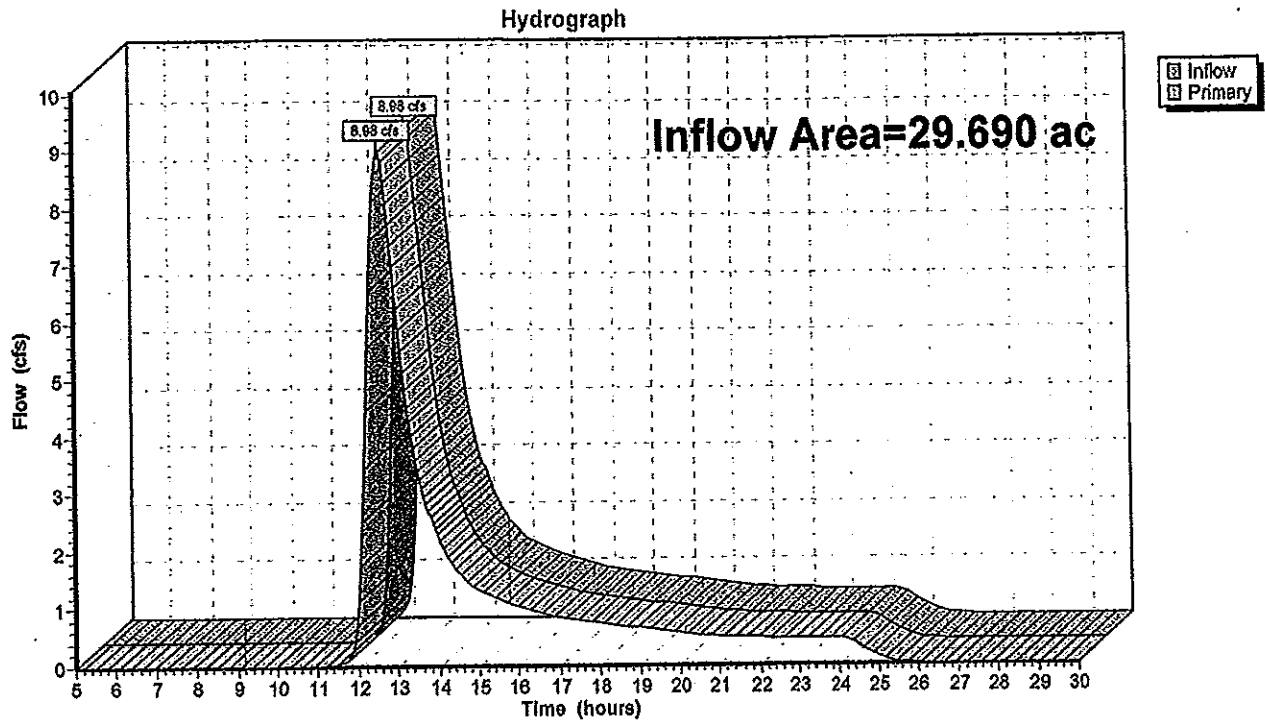


Summary for Link 4-5: Total Offsite towards Frankhauser Road

Inflow Area = 29.690 ac, 0.00% Impervious, Inflow Depth = 0.62" for 1-Year event
Inflow = 8.98 cfs @ 12.56 hrs, Volume= 1.545 af
Primary = 8.98 cfs @ 12.56 hrs, Volume= 1.545 af, Atten=0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-30.00 hrs, dt= 0.05 hrs

Link 4-5: Total Offsite towards Frankhauser Road



Westwood PreDevelopment

Type II 24-hr 10-Year Rainfall=3.50"

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Time span=5.00-30.00 hrs, dt=0.05 hrs, 501 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment DA1: Offsite East Towards Audubon Par 3 Runoff Area=21.260 ac 0.00% Impervious Runoff Depth=1.64"
Flow Length=870' Tc=40.6 min CN=80 Runoff=24.20 cfs 2.899 af

Subcatchment DA2: Offsite East Towards Audubon Par 3 Runoff Area=55.160 ac 0.00% Impervious Runoff Depth=1.64"
Flow Length=2,475' Tc=54.1 min CN=80 Runoff=51.08 cfs 7.522 af

Subcatchment DA3: Direct to Ellcott Creek Runoff Area=22.320 ac 0.00% Impervious Runoff Depth=1.64"
Flow Length=1,755' Tc=36.1 min CN=80 Runoff=27.56 cfs 3.044 af

Subcatchment DA4: Offsite West Towards Frankhauser Rd Runoff Area=15.330 ac 0.00% Impervious Runoff Depth=1.64"
Flow Length=1,155' Tc=44.5 min CN=80 Runoff=16.33 cfs 2.090 af

Subcatchment DA5: Offsite West Towards Frankhauser Rd Runoff Area=14.360 ac 0.00% Impervious Runoff Depth=1.64"
Flow Length=1,755' Tc=66.2 min CN=80 Runoff=11.44 cfs 1.958 af

Subcatchment DA6: Direct to Ellcott Creek Runoff Area=46.510 ac 10.00% Impervious Runoff Depth=1.78"
Flow Length=2,220' Tc=44.6 min CN=82 Runoff=54.44 cfs 6.909 af

Link 1-2: Total Offsite To Audubon Par 3 Inflow=72.63 cfs 10.421 af
Primary=72.63 cfs 10.421 af

Link 3-6: Total to Ellcott Creek Inflow=80.61 cfs 9.953 af
Primary=80.61 cfs 9.953 af

Link 4-5: Total Offsite towards Frankhauser Road Inflow=25.97 cfs 4.049 af
Primary=25.97 cfs 4.049 af

Total Runoff Area = 174.940 ac Runoff Volume = 24.422 af Average Runoff Depth = 1.68"
97.34% Pervious = 170.290 ac 2.66% Impervious = 4.650 ac

Summary for Subcatchment DA1: Offsite East Towards Audubon Par 3

Runoff = 24.20 cfs @ 12.39 hrs, Volume= 2.899 af, Depth= 1.64"

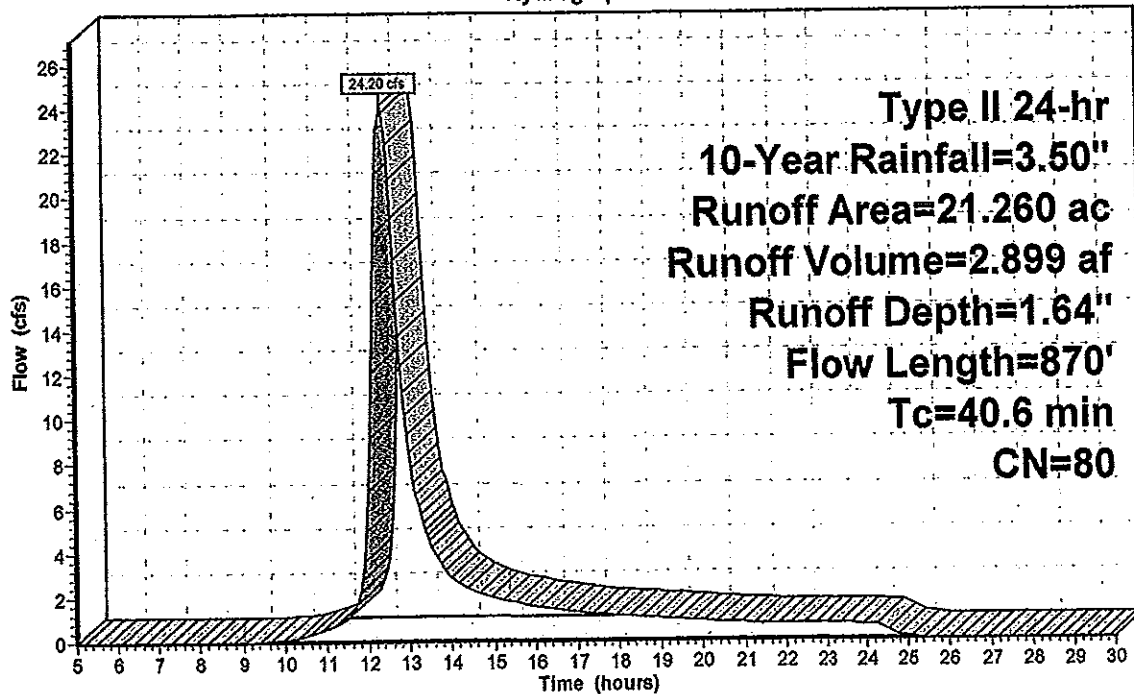
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 10-Year Rainfall=3.50"

Area (ac)	CN	Description
* 15.930	80	Odessa (Od) - Open Space - Golf Course and Lawn, Good, HSG D
* 4.330	80	Schoharie (SaB) - Open Space - Golf Course and Lawn, Good, HSG D
* 1.000	80	Schoharie (SaA) - Open Space - Golf Course and Lawn, Good, HSG D
21.260	80	Weighted Average
21.260		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
27.4	150	0.0047	0.09		Sheet Flow, A-B Grass: Short n= 0.150 P2= 2.50"
13.2	720	0.0032	0.91		Shallow Concentrated Flow, B-C Unpaved Kv= 16.1 fps
40.6	870	Total			

Subcatchment DA1: Offsite East Towards Audubon Par 3

Hydrograph



Summary for Subcatchment DA2: Offsite East Towards Audubon Par 3

Runoff = 51.08 cfs @ 12.56 hrs, Volume= 7.522 af, Depth= 1.64"

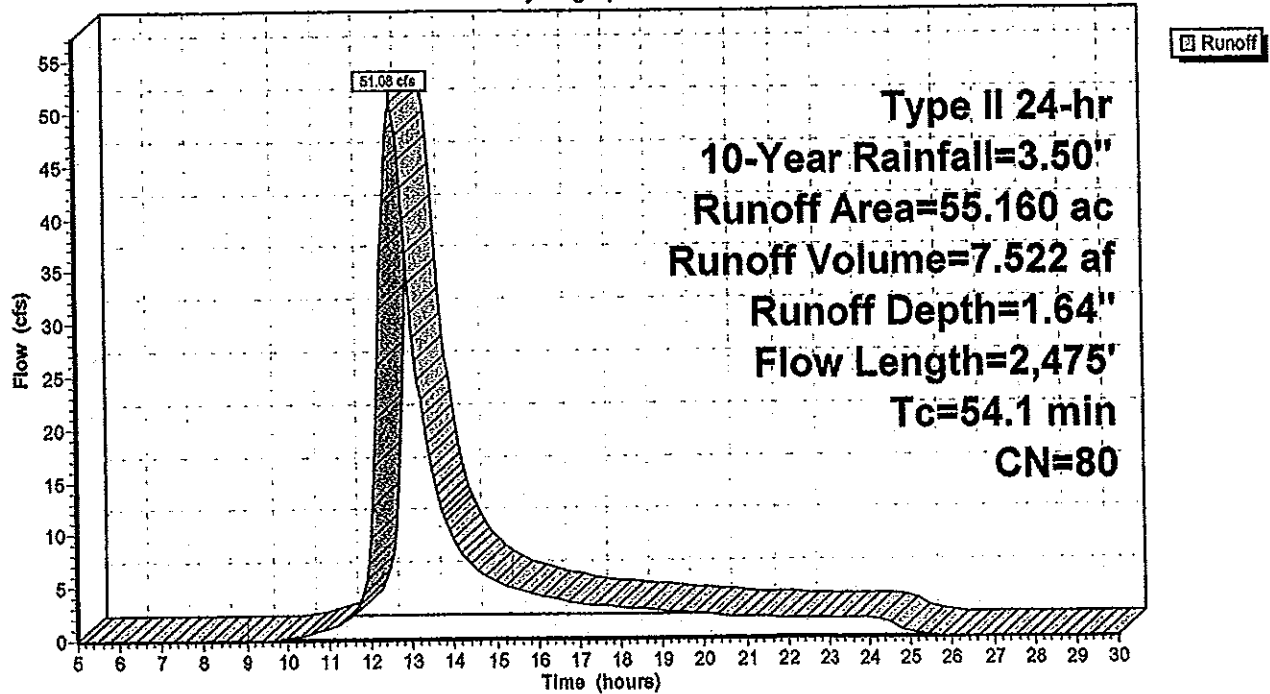
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-Year Rainfall=3.50"

Area (ac)	CN	Description
* 27.400	80	Odessa (Od) - Open Space - Golf Course and Lawn, Good, HSG D
* 9.150	80	Schoharie (SaB) - Open Space - Golf Course and Lawn, Good, HSG D
* 2.960	80	Schoharie (SaA) - Open Space - Golf Course and Lawn, Good, HSG D
* 9.380	80	Urban Odessa (Ut) - Open Space - Golf Course and Lawn, Good, HSG D
* 6.270	80	Cosad (Cv) - Open Space - Golf Course and Lawn, Good, HSG D
55.160	80	Weighted Average
55.160		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.5	150	0.0167	0.15		Sheet Flow, A-B Grass: Short n= 0.150 P2= 2.50"
37.6	2,325	0.0041	1.03		Shallow Concentrated Flow, B-C Unpaved Kv= 16.1 fps
54.1	2,475	Total			

Subcatchment DA2: Offsite East Towards Audubon Par 3

Hydrograph



Summary for Subcatchment DA3: Direct to Ellcott Creek

Runoff = 27.56 cfs @ 12.32 hrs, Volume= 3.044 af, Depth= 1.64"

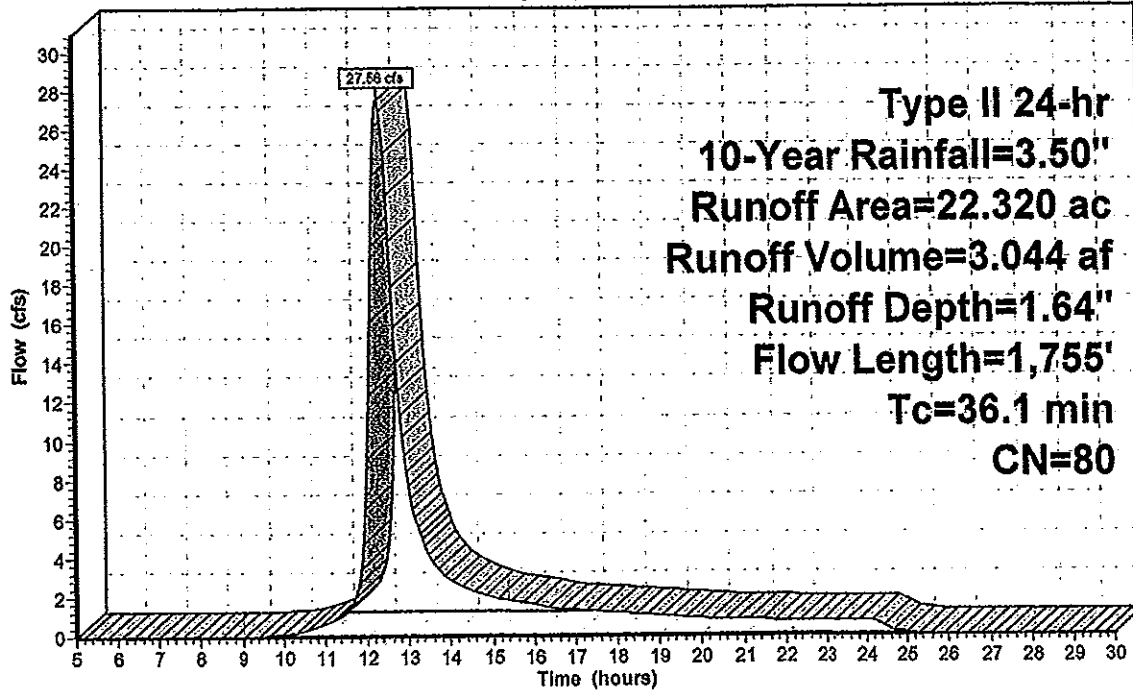
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-Year Rainfall=3.50"

Area (ac)	CN	Description
* 6.800	80	Odessa (Od) - Open Space - Golf Course and Lawn, Good, HSG D
* 5.830	80	Schoharie (SaB) - Open Space - Golf Course and Lawn, Good, HSG D
* 9.690	80	Cosad (Cv) - Open Space - Golf Course and Lawn, Good, HSG D
22.320	80	Weighted Average
22.320		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.5	150	0.0167	0.15		Sheet Flow, A-B Grass: Short n= 0.150 P2= 2.50"
19.6	1,605	0.0072	1.37		Shallow Concentrated Flow, B-C Unpaved Kv= 16.1 fps
36.1	1,755	Total			

Subcatchment DA3: Direct to Ellcott Creek

Hydrograph



Summary for Subcatchment DA4: Offsite West Towards Frankhauser Rd

Runoff = 16.33 cfs @ 12.43 hrs, Volume= 2.090 af, Depth= 1.64"

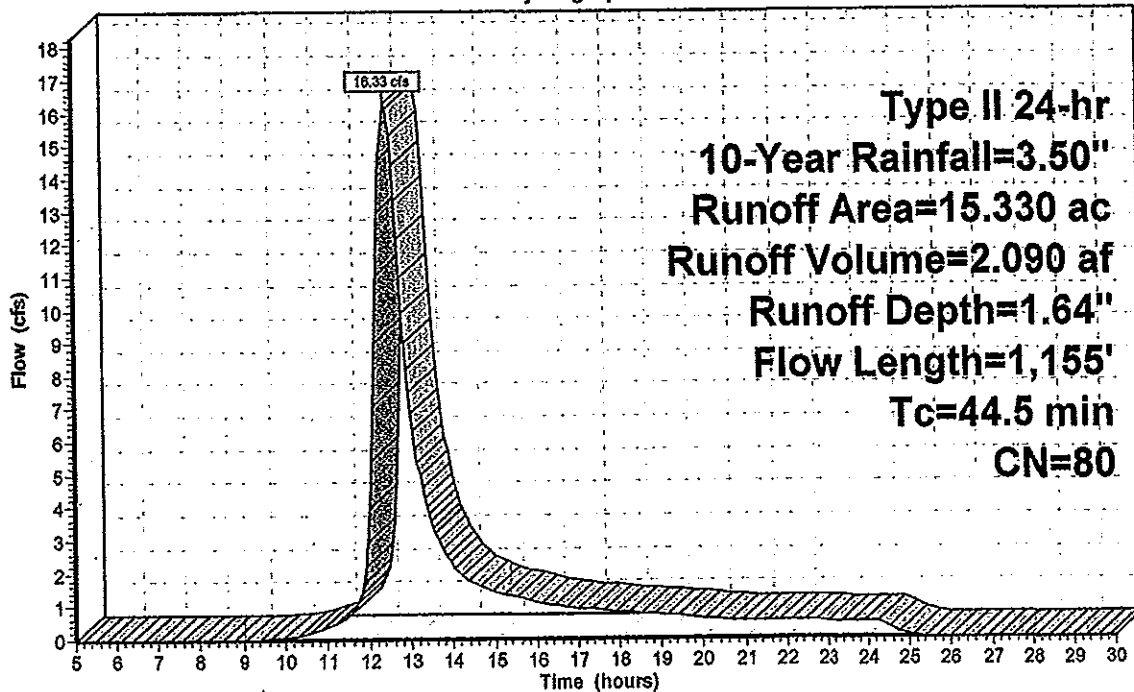
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-Year Rainfall=3.50"

Area (ac)	CN	Description
* 8.970	80	Odessa (Od) - Open Space - Golf Course and Lawn, Good, HSG D
* 1.530	80	Claverack (CrA) - Open Space - Golf Course and Lawn, Good, HSG D
* 4.830	80	Cosad (Cv) - Open Space - Golf Course and Lawn, Good, HSG D
15.330	80	Weighted Average
15.330		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
27.4	150	0.0047	0.09		Sheet Flow, A-B Grass: Short n= 0.150 P2= 2.50"
17.1	1,005	0.0037	0.98		Shallow Concentrated Flow, B-C Unpaved Kv= 16.1 fps
44.5	1,155	Total			

Subcatchment DA4: Offsite West Towards Frankhauser Rd

Hydrograph



Summary for Subcatchment DA5: Offsite West Towards Frankhauser Rd

Runoff = 11.44 cfs @ 12.72 hrs, Volume= 1.958 af, Depth= 1.64"

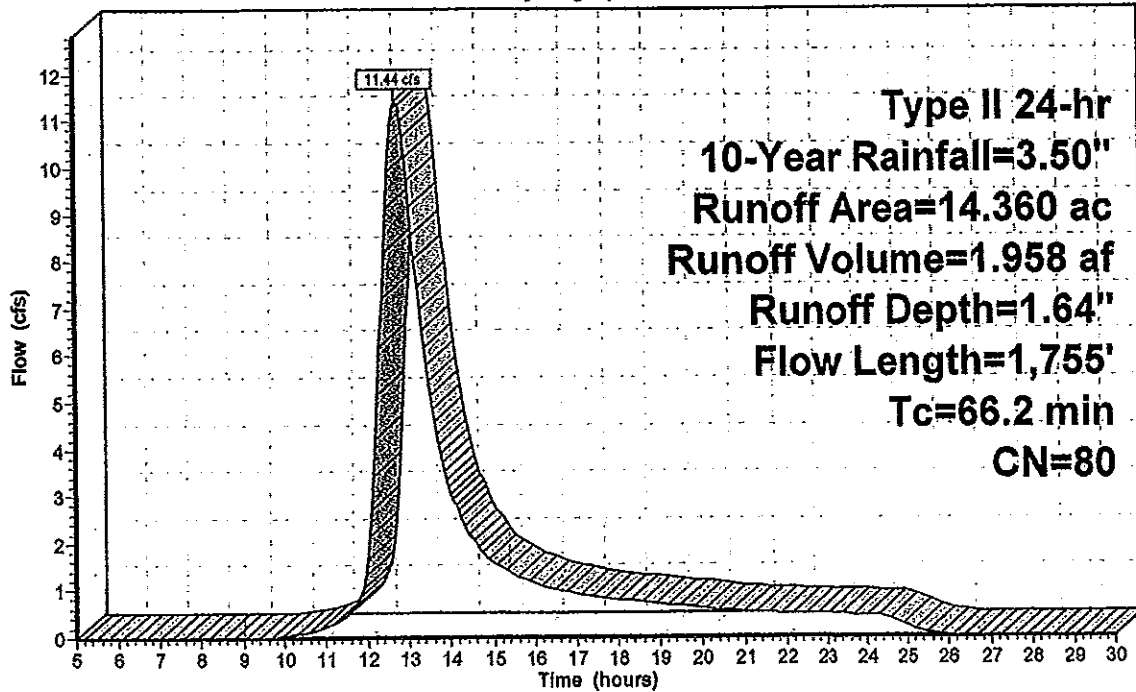
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-Year Rainfall=3.50"

Area (ac)	CN	Description
* 5.350	80	Odessa (Od) - Open Space - Golf Course and Lawn, Good, HSG D
* 0.400	80	Schoharie (SaA) - Open Space - Golf Course and Lawn, Good, HSG D
* 4.440	80	Claverack (CrA) - Open Space - Golf Course and Lawn, Good, HSG D
* 4.170	80	Lakemont (La) - Open Space - Golf Course and Lawn, Good, HSG D
14.360	80	Weighted Average
14.360		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
38.5	150	0.0020	0.06		Sheet Flow, A-B Grass: Short n= 0.150 P2= 2.50"
27.7	1,605	0.0036	0.97		Shallow Concentrated Flow, B-C Unpaved Kv= 16.1 fps
66.2	1,755	Total			

Subcatchment DA5: Offsite West Towards Frankhauser Rd

Hydrograph



Runoff

Type II 24-hr
10-Year Rainfall=3.50"
Runoff Area=14.360 ac
Runoff Volume=1.958 af
Runoff Depth=1.64"
Flow Length=1,755'
Tc=66.2 min
CN=80

Summary for Subcatchment DA6: Direct to Ellicott Creek

Runoff = 54.44 cfs @ 12.43 hrs, Volume= 6.909 af, Depth= 1.78"

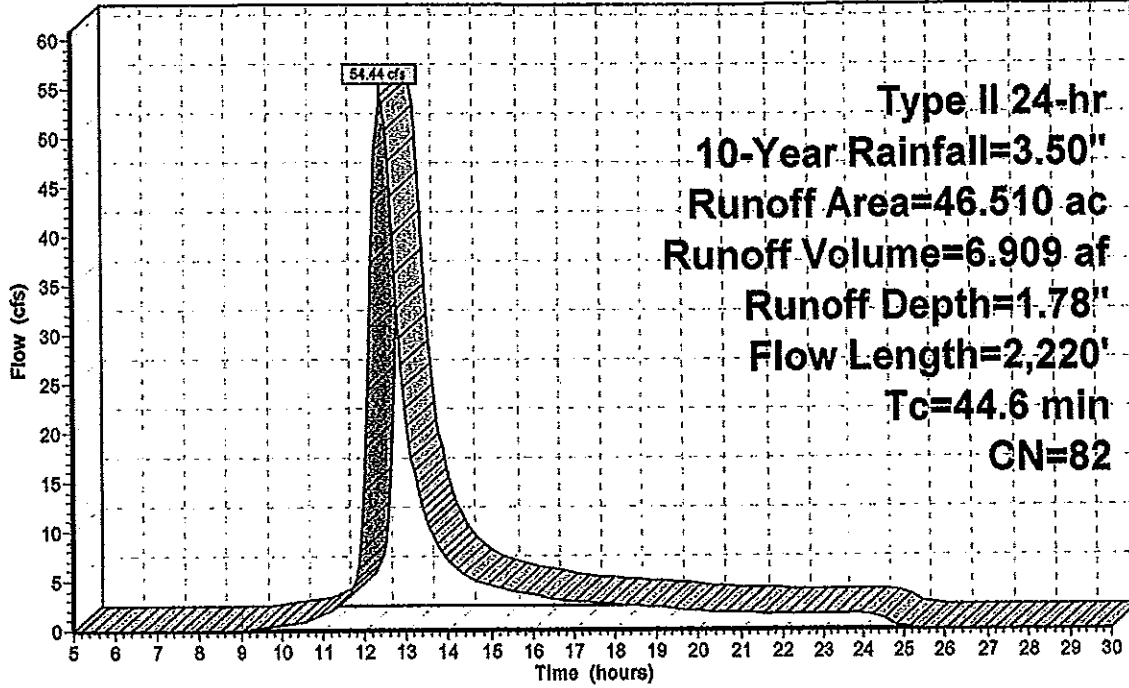
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-Year Rainfall=3.50"

Area (ac)	CN	Description
* 19.430	80	Claverack (CrA) - Open Space - Golf Course and Lawn, Good, HSG D
* 4.650	98	Claverack (CrA) - Open Space - Impervious - Pavement and Roof, HSG D
* 0.740	80	Odessa (Od) - Open Space - Golf Course and Lawn, Good, HSG D
* 8.310	80	Schoharie (SaB) - Open Space - Golf Course and Lawn, Good, HSG D
* 9.460	80	Teel (Te) - Open Space - Golf Course and Lawn, Good, HSG D
* 3.920	80	Cosad (Cv) - Open Space - Golf Course and Lawn, Good, HSG D
46.510	82	Weighted Average
41.860		90.00% Pervious Area
4.650		10.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.7	150	0.0140	0.14		Sheet Flow, A-B Grass: Short n= 0.150 P2= 2.50"
12.7	885	0.0052	1.16		Shallow Concentrated Flow, B-C Unpaved Kv= 16.1 fps
2.2	375	0.0320	2.88		Shallow Concentrated Flow, C-D Unpaved Kv= 16.1 fps
12.0	810	0.0049	1.13		Shallow Concentrated Flow, D-E Unpaved Kv= 16.1 fps
44.6	2,220	Total			

Subcatchment DA6: Direct to Eilcott Creek

Hydrograph



Type II 24-hr
10-Year Rainfall=3.50"
Runoff Area=46.510 ac
Runoff Volume=6.909 af
Runoff Depth=1.78"
Flow Length=2,220'
Tc=44.6 min
CN=82

Runoff

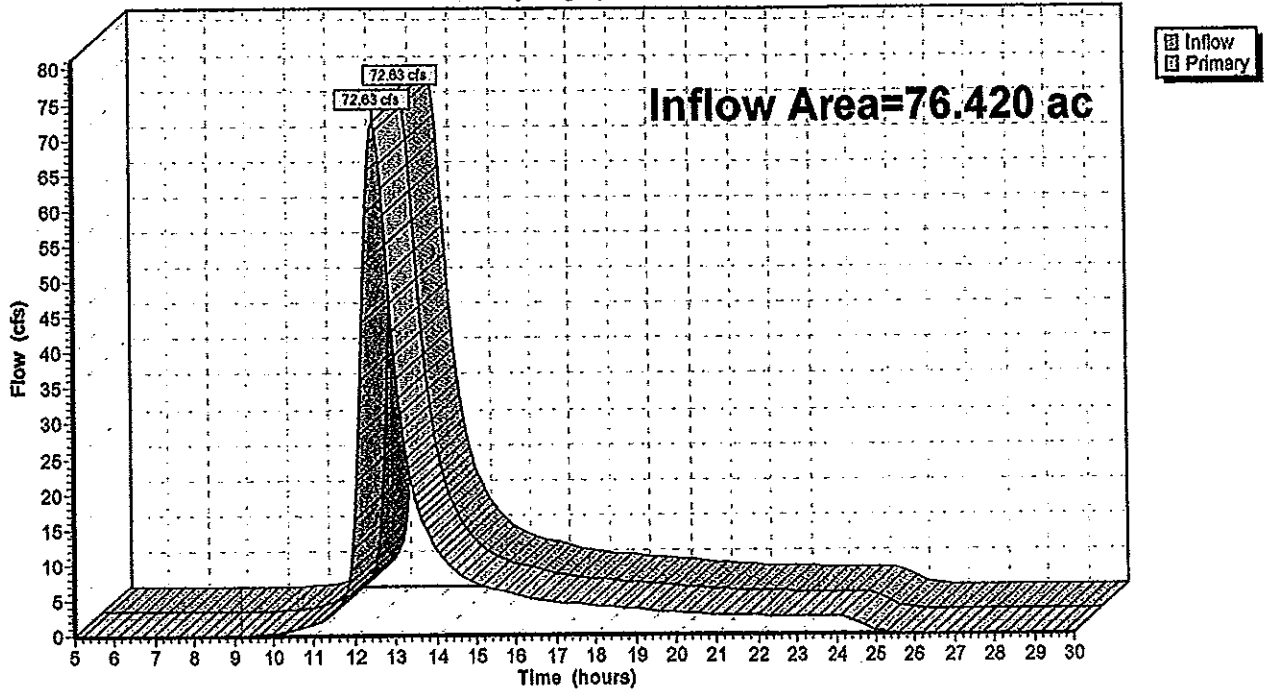
Summary for Link 1-2: Total Offsite To Audubon Par 3

Inflow Area = 76.420 ac, 0.00% Impervious, Inflow Depth = 1.64" for 10-Year event
Inflow = 72.63 cfs @ 12.50 hrs, Volume= 10.421 af
Primary = 72.63 cfs @ 12.50 hrs, Volume= 10.421 af, Atten=0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-30.00 hrs, dt= 0.05 hrs

Link 1-2: Total Offsite To Audubon Par 3

Hydrograph



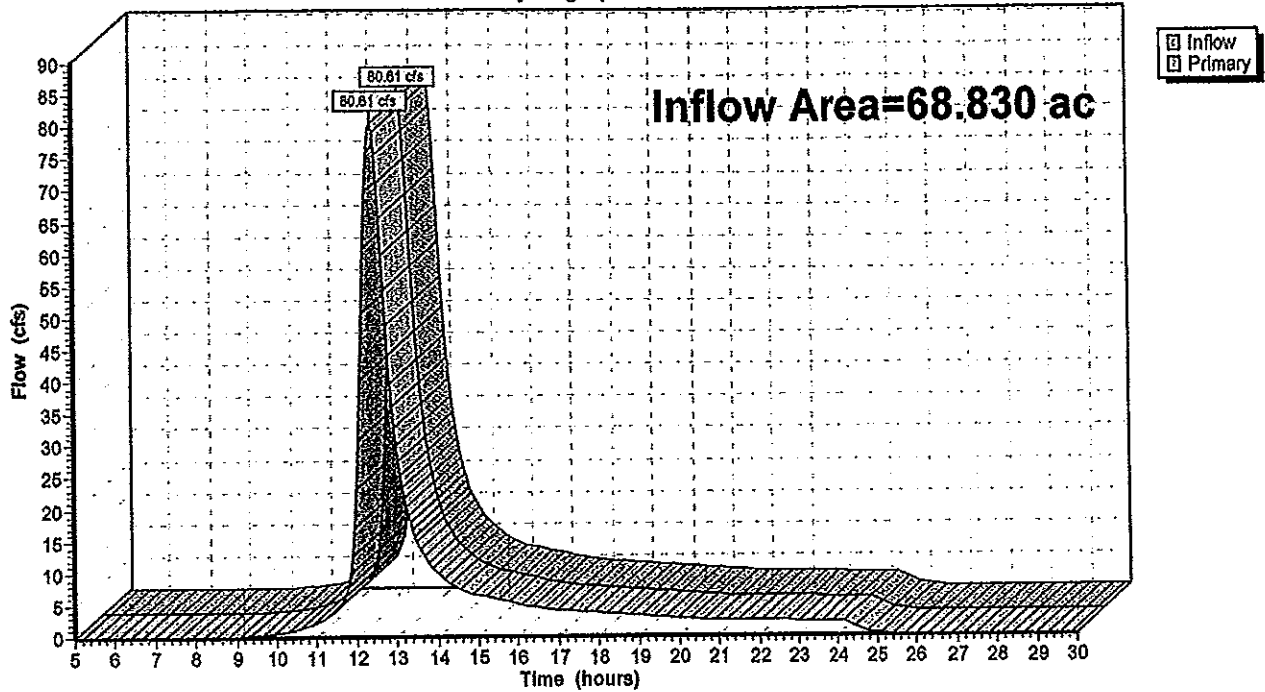
Summary for Link 3-6: Total to Ellcott Creek

Inflow Area = 68.830 ac, 6.76% Impervious, Inflow Depth = 1.74" for 10-Year event
Inflow = 80.61 cfs @ 12.39 hrs, Volume= 9.953 af
Primary = 80.61 cfs @ 12.39 hrs, Volume= 9.953 af, Atten=0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-30.00 hrs, dt= 0.05 hrs

Link 3-6: Total to Ellcott Creek

Hydrograph



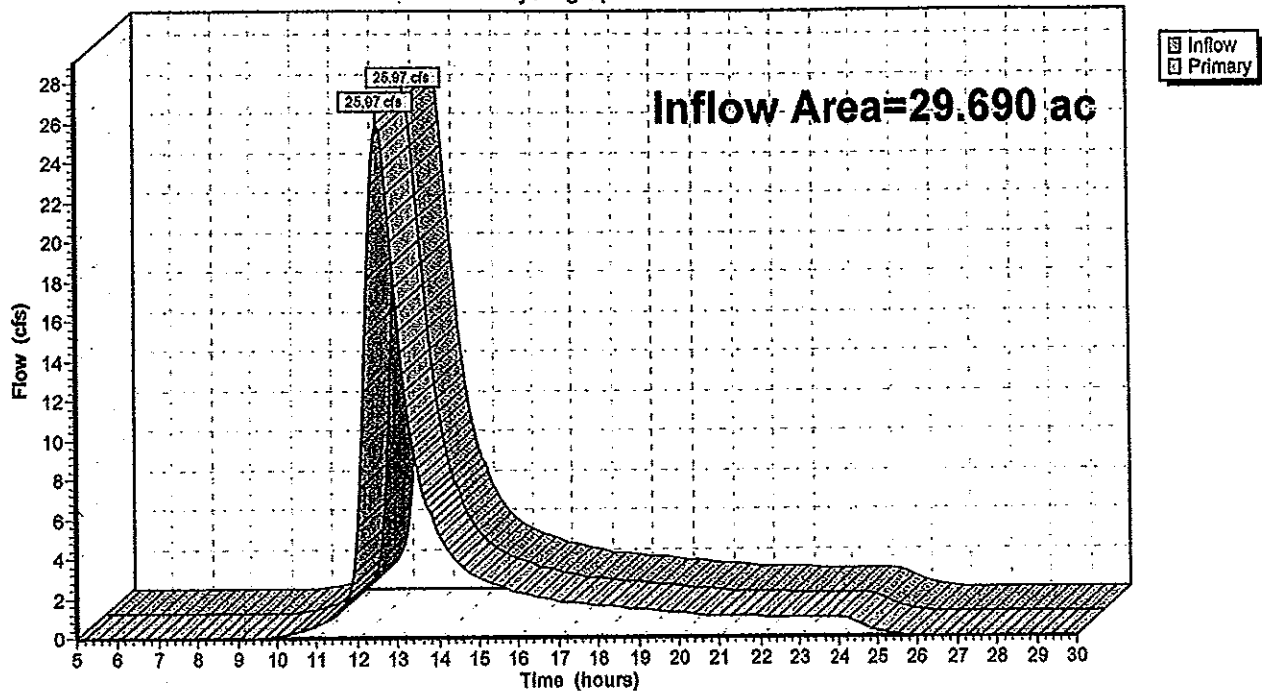
Summary for Link 4-5: Total Offsite towards Frankhauser Road

Inflow Area = 29.690 ac, 0.00% Impervious, Inflow Depth = 1.64" for 10-Year event
Inflow = 25.97 cfs @ 12.52 hrs, Volume= 4.049 af
Primary = 25.97 cfs @ 12.52 hrs, Volume= 4.049 af, Atten=0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-30.00 hrs, dt= 0.05 hrs

Link 4-5: Total Offsite towards Frankhauser Road

Hydrograph



Westwood PreDevelopment

Type II 24-hr 100-Year Rainfall=4.80"

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Time span=5.00-30.00 hrs, dt=0.05 hrs, 501 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment DA1: Offsite East Towards Audubon Par 3 Runoff Area=21.260 ac 0.00% Impervious Runoff Depth=2.72"
Flow Length=870' Tc=40.6 min CN=80 Runoff=40.80 cfs 4.817 af

Subcatchment DA2: Offsite East Towards Audubon Par 3 Runoff Area=55.160 ac 0.00% Impervious Runoff Depth=2.72"
Flow Length=2,475' Tc=54.1 min CN=80 Runoff=86.29 cfs 12.499 af

Subcatchment DA3: Direct to Ellcott Creek Runoff Area=22.320 ac 0.00% Impervious Runoff Depth=2.72"
Flow Length=1,755' Tc=36.1 min CN=80 Runoff=46.44 cfs 5.058 af

Subcatchment DA4: Offsite West Towards Frankhauser Rd Runoff Area=15.330 ac 0.00% Impervious Runoff Depth=2.72"
Flow Length=1,155' Tc=44.5 min CN=80 Runoff=27.61 cfs 3.474 af

Subcatchment DA5: Offsite West Towards Frankhauser Rd Runoff Area=14.360 ac 0.00% Impervious Runoff Depth=2.72"
Flow Length=1,755' Tc=66.2 min CN=80 Runoff=19.35 cfs 3.254 af

Subcatchment DA6: Direct to Ellcott Creek Runoff Area=46.510 ac 10.00% Impervious Runoff Depth=2.90"
Flow Length=2,220' Tc=44.6 min CN=82 Runoff=89.32 cfs 11.243 af

Link 1-2: Total Offsite To Audubon Par 3

Inflow=122.73 cfs 17.316 af
Primary=122.73 cfs 17.316 af

Link 3-6: Total to Ellcott Creek

Inflow=133.46 cfs 16.301 af
Primary=133.46 cfs 16.301 af

Link 4-5: Total Offsite towards Frankhauser Road

Inflow=43.94 cfs 6.728 af
Primary=43.94 cfs 6.728 af

Total Runoff Area = 174.940 ac Runoff Volume = 40.344 af Average Runoff Depth = 2.77"
97.34% Pervious = 170.290 ac 2.66% Impervious = 4.650 ac

Summary for Subcatchment DA1: Offsite East Towards Audubon Par 3

Runoff = 40.80 cfs @ 12.38 hrs, Volume= 4.817 af, Depth= 2.72"

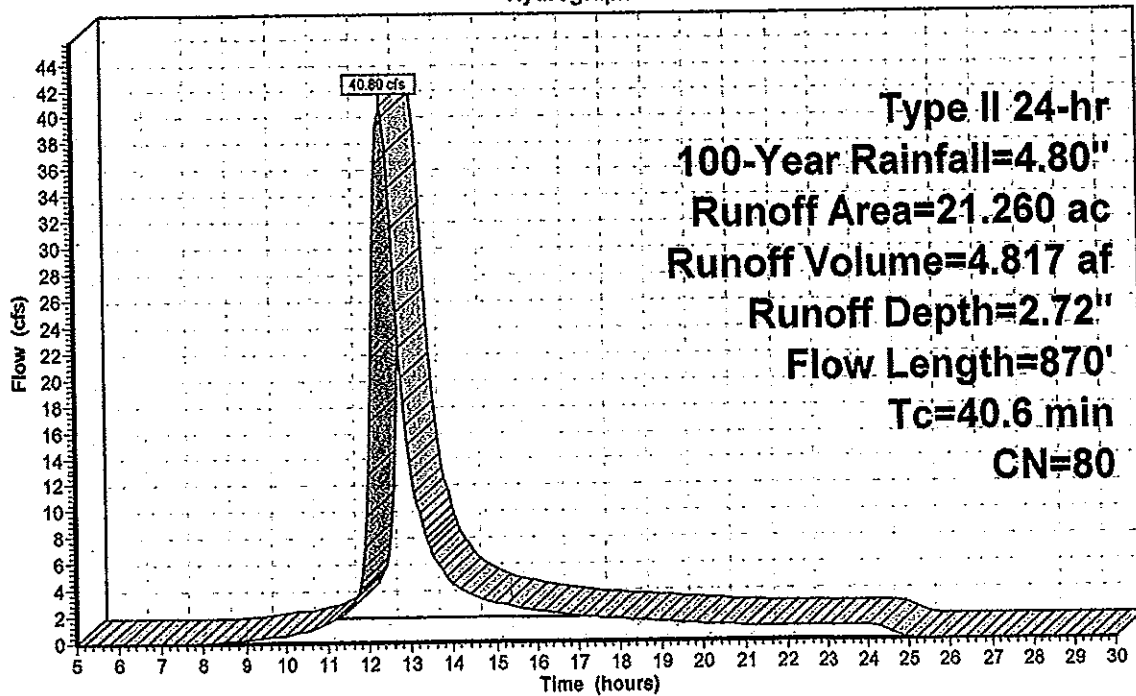
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-Year Rainfall=4.80"

Area (ac)	CN	Description
* 15.930	80	Odessa (Od) - Open Space - Golf Course and Lawn, Good, HSG D
* 4.330	80	Schoharie (SaB) - Open Space - Golf Course and Lawn, Good, HSG D
* 1.000	80	Schoharie (SaA) - Open Space - Golf Course and Lawn, Good, HSG D
21.260	80	Weighted Average
21.260		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
27.4	150	0.0047	0.09		Sheet Flow, A-B Grass: Short n= 0.150 P2= 2.50"
13.2	720	0.0032	0.91		Shallow Concentrated Flow, B-C Unpaved Kv= 16.1 fps
40.6	870				Total

Subcatchment DA1: Offsite East Towards Audubon Par 3

Hydrograph



Summary for Subcatchment DA2: Offsite East Towards Audubon Par 3

Runoff = 86.29 cfs @ 12.55 hrs, Volume= 12.499 af, Depth= 2.72"

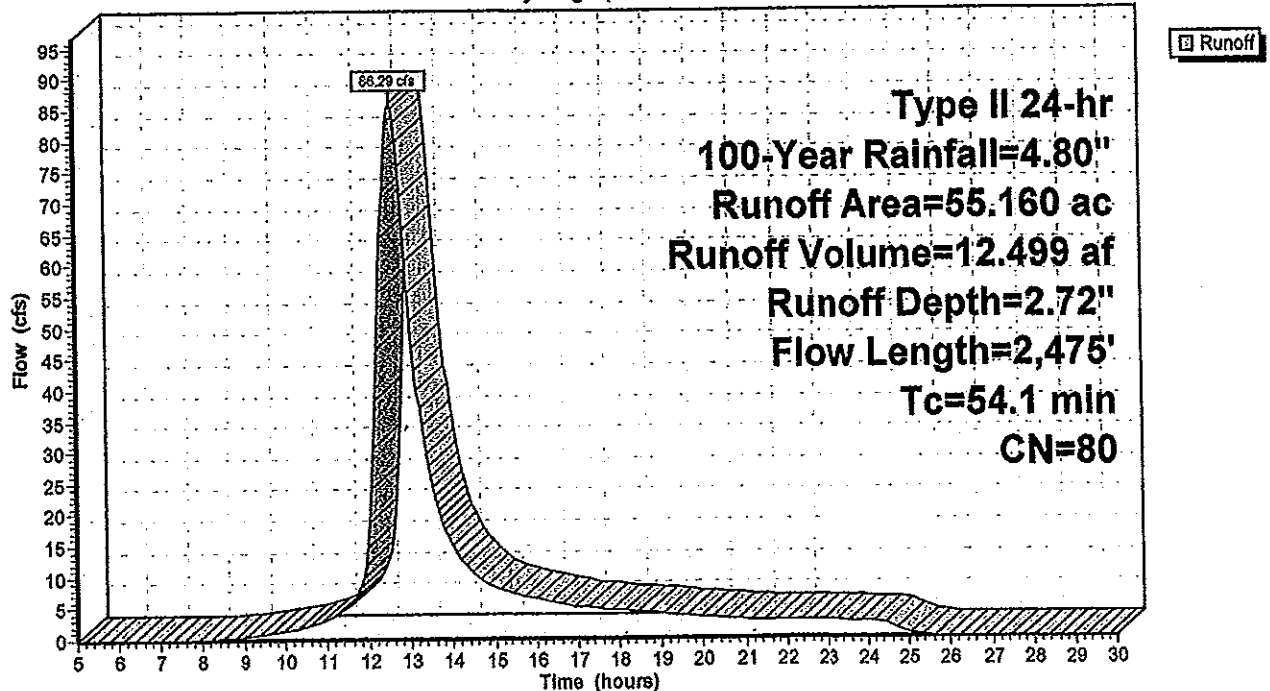
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 100-Year Rainfall=4.80"

Area (ac)	CN	Description
* 27.400	80	Odessa (Od) - Open Space - Golf Course and Lawn, Good, HSG D
* 9.150	80	Schoharie (SaB) - Open Space - Golf Course and Lawn, Good, HSG D
* 2.960	80	Schoharie (SaA) - Open Space - Golf Course and Lawn, Good, HSG D
* 9.380	80	Urban Odessa (Ut) - Open Space - Golf Course and Lawn, Good, HSG D
* 6.270	80	Cosad (Cv) - Open Space - Golf Course and Lawn, Good, HSG D
55.160	80	Weighted Average
55.160		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.5	150	0.0167	0.15		Sheet Flow, A-B Grass: Short n= 0.150 P2= 2.50"
37.6	2,325	0.0041	1.03		Shallow Concentrated Flow, B-C Unpaved Kv= 16.1 fps
54.1	2,475	Total			

Subcatchment DA2: Offsite East Towards Audubon Par 3

Hydrograph



Summary for Subcatchment DA3: Direct to Ellcott Creek

Runoff = 46.44 cfs @ 12.32 hrs, Volume= 5.058 af, Depth= 2.72"

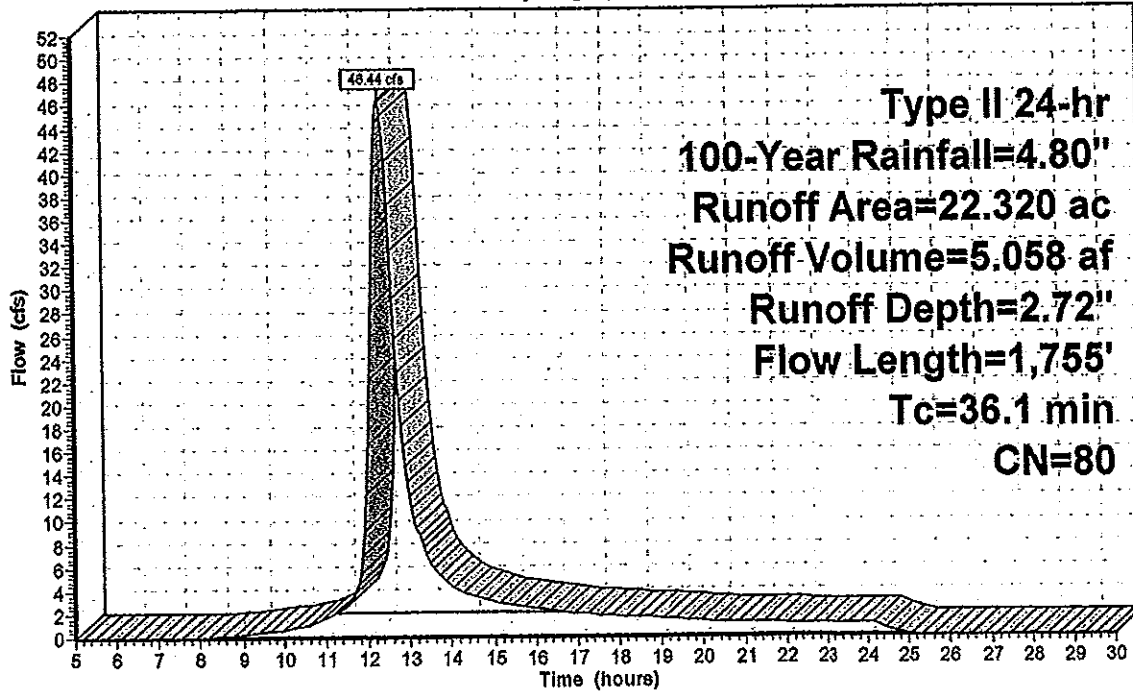
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-Year Rainfall=4.80"

Area (ac)	CN	Description
* 6.800	80	Odessa (Od) - Open Space - Golf Course and Lawn, Good, HSG D
* 5.830	80	Schoharle (SaB) - Open Space - Golf Course and Lawn, Good, HSG D
* 9.690	80	Cosad (Cv) - Open Space - Golf Course and Lawn, Good, HSG D
22.320	80	Weighted Average
22.320		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.5	150	0.0167	0.15		Sheet Flow, A-B Grass: Short n= 0.150 P2= 2.50"
19.6	1,605	0.0072	1.37		Shallow Concentrated Flow, B-C Unpaved Kv= 16.1 fps
36.1	1,755	Total			

Subcatchment DA3: Direct to Ellcott Creek

Hydrograph



Runoff

Type II 24-hr
100-Year Rainfall=4.80"
Runoff Area=22.320 ac
Runoff Volume=5.058 af
Runoff Depth=2.72"
Flow Length=1,755'
Tc=36.1 min
CN=80

Summary for Subcatchment DA4: Offsite West Towards Frankhauser Rd

Runoff = 27.61 cfs @ 12.42 hrs, Volume= 3.474 af, Depth= 2.72"

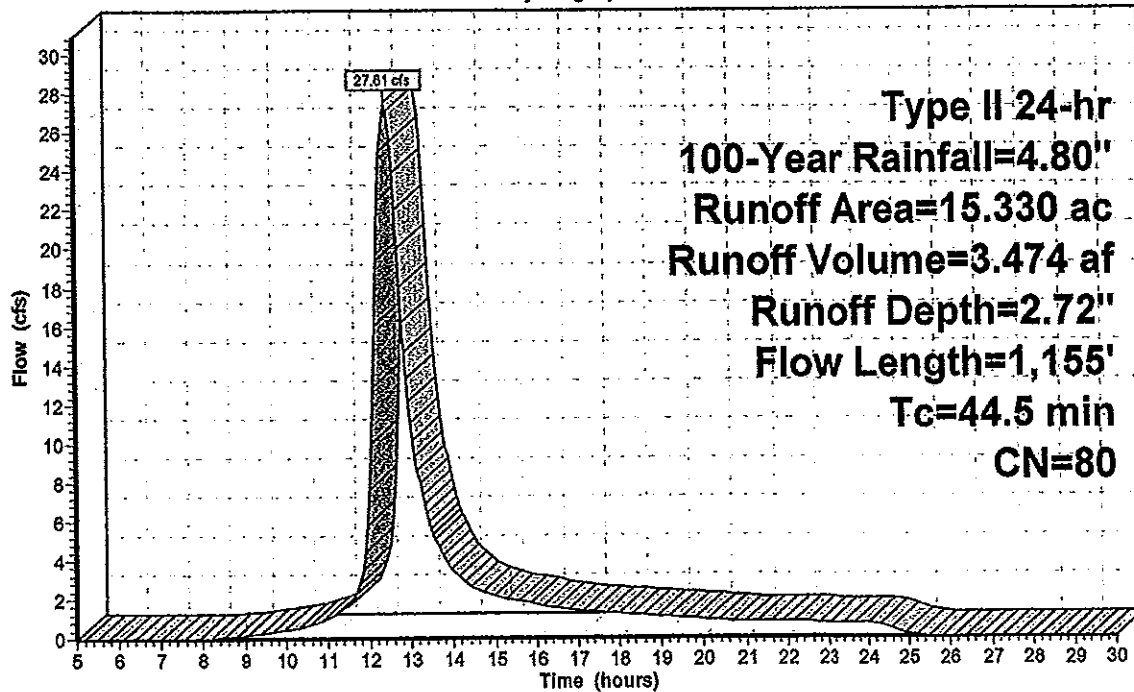
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 100-Year Rainfall=4.80"

Area (ac)	CN	Description
* 8.970	80	Odessa (Od) - Open Space - Golf Course and Lawn, Good, HSG D
* 1.530	80	Claverack (CrA) - Open Space - Golf Course and Lawn, Good, HSG D
* 4.830	80	Cosad (Cv) - Open Space - Golf Course and Lawn, Good, HSG D
15.330	80	Weighted Average
15.330		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
27.4	150	0.0047	0.09		Sheet Flow, A-B Grass: Short n= 0.150 P2= 2.50"
17.1	1,005	0.0037	0.98		Shallow Concentrated Flow, B-C Unpaved Kv= 16.1 fps
44.5	1,155	Total			

Subcatchment DA4: Offsite West Towards Frankhauser Rd

Hydrograph



Runoff

Type II 24-hr
 100-Year Rainfall=4.80"
 Runoff Area=15.330 ac
 Runoff Volume=3.474 af
 Runoff Depth=2.72"
 Flow Length=1,155'
 Tc=44.5 min
 CN=80

Summary for Subcatchment DA5: Offsite West Towards Frankhauser Rd

Runoff = 19.35 cfs @ 12.71 hrs, Volume= 3.254 af, Depth= 2.72"

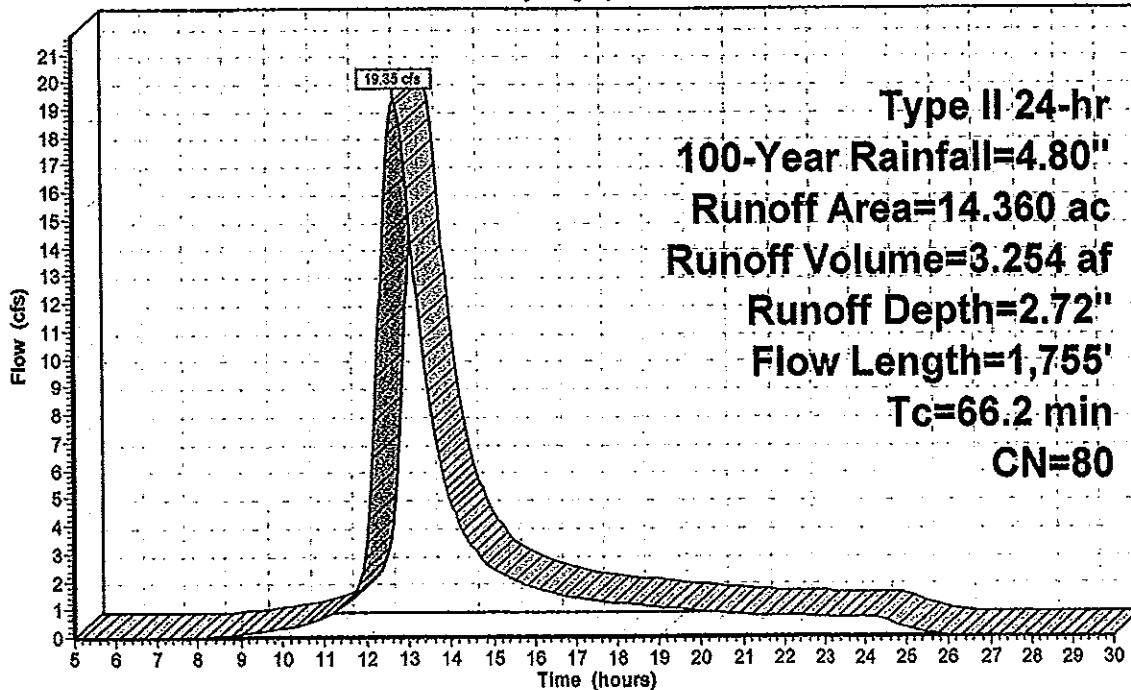
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 100-Year Rainfall=4.80"

Area (ac)	CN	Description
* 5.350	80	Odessa (Od) - Open Space - Golf Course and Lawn, Good, HSG D
* 0.400	80	Schoharie (SaA) - Open Space - Golf Course and Lawn, Good, HSG D
* 4.440	80	Claverack (CrA) - Open Space - Golf Course and Lawn, Good, HSG D
* 4.170	80	Lakemont (La) - Open Space - Golf Course and Lawn, Good, HSG D
14.360	80	Weighted Average
14.360		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
38.5	150	0.0020	0.06		Sheet Flow, A-B Grass: Short n= 0.150 P2= 2.50"
27.7	1,605	0.0036	0.97		Shallow Concentrated Flow, B-C Unpaved Kv= 16.1 fps
66.2	1,755	Total			

Subcatchment DA5: Offsite West Towards Frankhauser Rd

Hydrograph



Runoff

Westwood PreDevelopment

Type II 24-hr 100-Year Rainfall=4.80"

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Summary for Subcatchment DA6: Direct to Ellicott Creek

Runoff = 89.32 cfs @ 12.42 hrs, Volume= 11.243 af, Depth= 2.90"

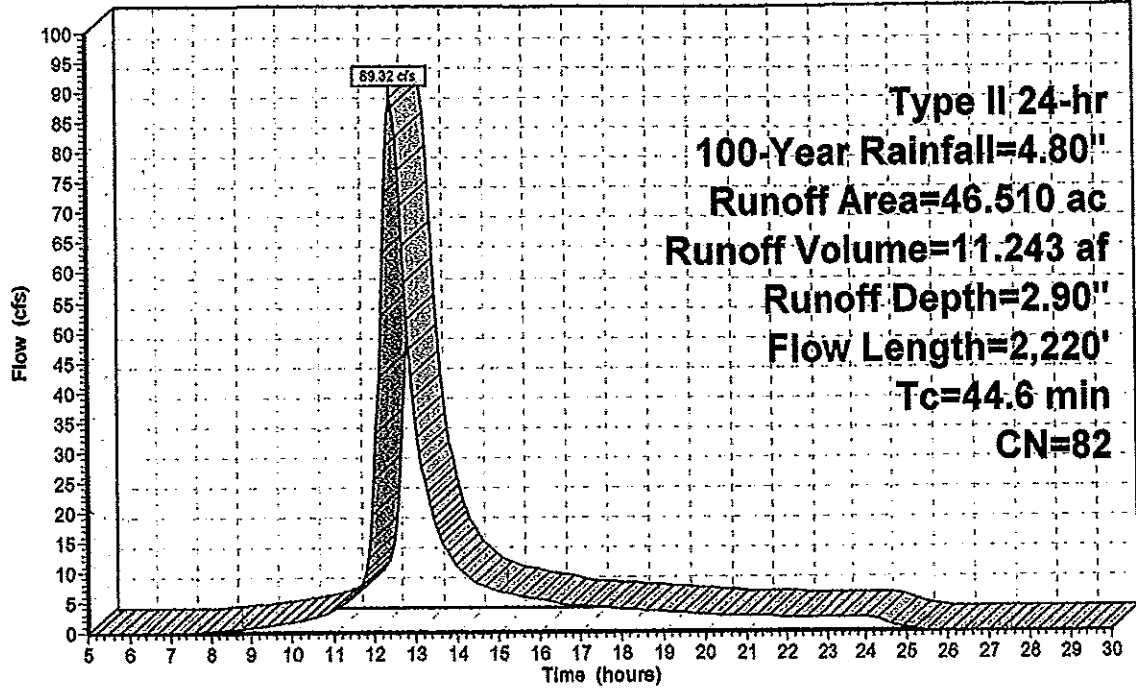
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 100-Year Rainfall=4.80"

Area (ac)	CN	Description
* 19.430	80	Claverack (CrA) - Open Space - Golf Course and Lawn, Good, HSG D
* 4.650	98	Claverack (CrA) - Open Space - Impervious - Pavement and Roof, HSG D
* 0.740	80	Odessa (Od) - Open Space - Golf Course and Lawn, Good, HSG D
* 8.310	80	Schoharie (SaB) - Open Space - Golf Course and Lawn, Good, HSG D
* 9.460	80	Teel (Te) - Open Space - Golf Course and Lawn, Good, HSG D
* 3.920	80	Cosad (Cv) - Open Space - Golf Course and Lawn, Good, HSG D
46.510	82	Weighted Average
41.860		90.00% Pervious Area
4.650		10.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.7	150	0.0140	0.14		Sheet Flow, A-B Grass: Short n= 0.150 P2= 2.50"
12.7	885	0.0052	1.16		Shallow Concentrated Flow, B-C Unpaved Kv= 16.1 fps
2.2	375	0.0320	2.88		Shallow Concentrated Flow, C-D Unpaved Kv= 16.1 fps
12.0	810	0.0049	1.13		Shallow Concentrated Flow, D-E Unpaved Kv= 16.1 fps
44.6	2,220	Total			

Subcatchment DA6: Direct to Ellcott Creek

Hydrograph



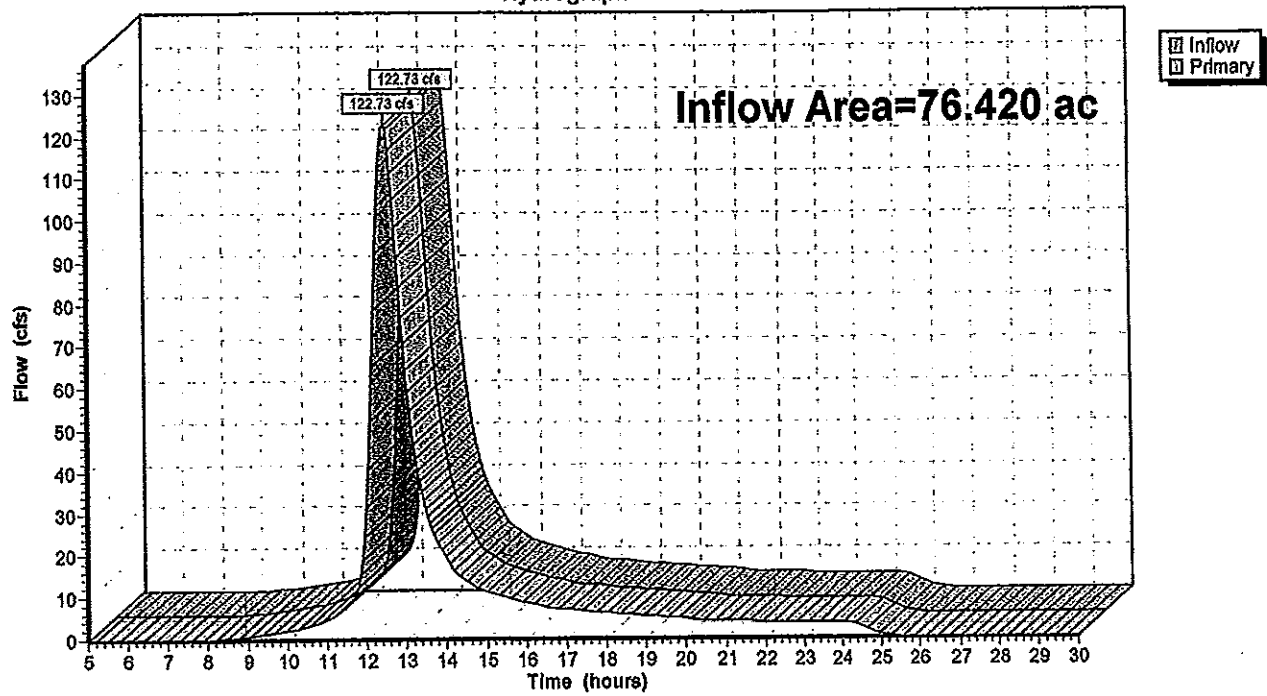
Summary for Link 1-2: Total Offsite To Audubon Par 3

Inflow Area = 76.420 ac, 0.00% Impervious, Inflow Depth = 2.72" for 100-Year event
Inflow = 122.73 cfs @ 12.48 hrs, Volume= 17.316 af
Primary = 122.73 cfs @ 12.48 hrs, Volume= 17.316 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-30.00 hrs, dt= 0.05 hrs

Link 1-2: Total Offsite To Audubon Par 3

Hydrograph



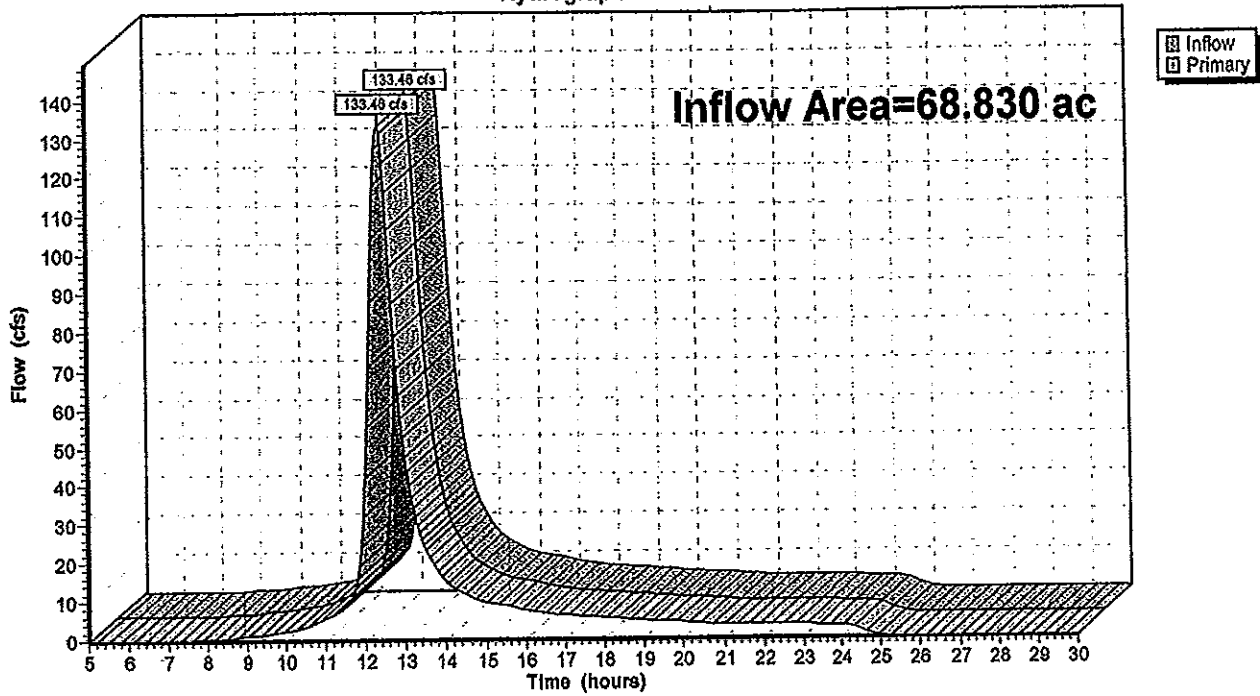
Summary for Link 3-6: Total to Ellcott Creek

Inflow Area = 68.830 ac, 6.76% Impervious, Inflow Depth = 2.84" for 100-Year event
Inflow = 133.46 cfs @ 12.38 hrs, Volume= 16.301 af
Primary = 133.46 cfs @ 12.38 hrs, Volume= 16.301 af, Atten=0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-30.00 hrs, dt= 0.05 hrs

Link 3-6: Total to Ellcott Creek

Hydrograph



Summary for Link 4-5: Total Offsite towards Frankhauser Road

Inflow Area = 29.690 ac, 0.00% impervious, Inflow Depth = 2.72" for 100-Year event

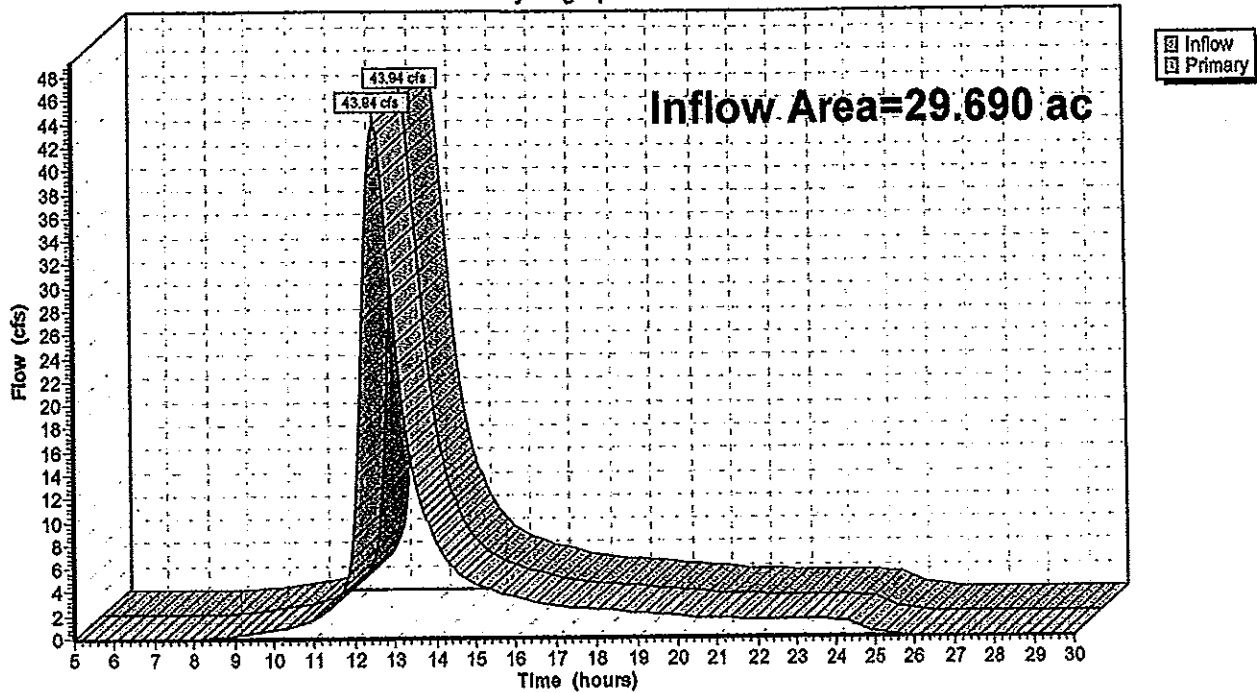
Inflow = 43.94 cfs @ 12.51 hrs, Volume= 6.728 af

Primary = 43.94 cfs @ 12.51 hrs, Volume= 6.728 af, Atten=0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-30.00 hrs, dt= 0.05 hrs

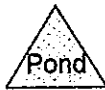
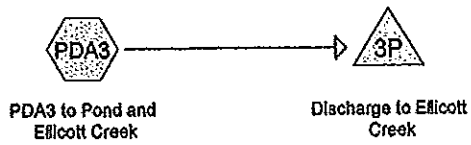
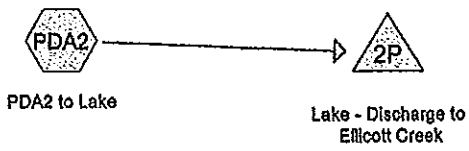
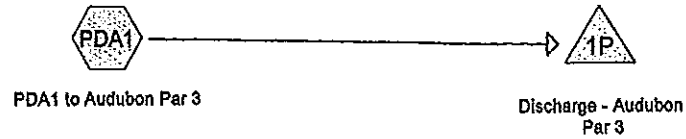
Link 4-5: Total Offsite towards Frankhauser Road

Hydrograph



APPENDIX B

POST DEVELOPMENT CALCULATIONS



Westwood PostDevelopment

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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
29.500	86	1/3 acre lots, 30% Imp, Townhomes, HSG D (PDA1)
25.040	87	1/4 acre lots, 38% Imp, Single Family Residential, HSG D (PDA2)
27.840	92	1/8 acre lots, 65% Imp, Patio Homes, HSG D (PDA1)
10.860	80	>75% Grass cover, Good, HSG D (PDA4)
20.540	87	Multifamily, Existing Clubhouse, Open Space, 40% Imp, HSG D (PDA3)
16.410	87	Senior Housing, 40% Imp, HSG D (PDA2)
44.750	95	Urban commercial, 85% Imp, Commons, HSG D (PDA2)
174.940	89	TOTAL AREA

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Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
174.940	HSG D	PDA1, PDA2, PDA3, PDA4
0.000	Other	
174.940		TOTAL AREA

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Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subc Numl
0.000	0.000	0.000	29.500	0.000	29.500	1/3 acre lots, 30% Imp, Townhomes	
0.000	0.000	0.000	25.040	0.000	25.040	1/4 acre lots, 38% Imp, Single Family Residential	
0.000	0.000	0.000	27.840	0.000	27.840	1/8 acre lots, 65% Imp, Patio Homes	
0.000	0.000	0.000	10.860	0.000	10.860	>75% Grass cover, Good	
0.000	0.000	0.000	20.540	0.000	20.540	Multifamily, Existing Clubhouse, Open Space, 40% Imp	
0.000	0.000	0.000	16.410	0.000	16.410	Senior Housing, 40% Imp	
0.000	0.000	0.000	44.750	0.000	44.750	Urban commercial, 85% Imp, Commons	
0.000	0.000	0.000	174.940	0.000	174.940	TOTAL AREA	

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Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (Inches)	Height (Inches)	Inside-Fill (Inches)
1	PDA1	0.00	0.00	600.0	0.0040	0.013	12.0	0.0	0.0
2	PDA1	0.00	0.00	1,200.0	0.0030	0.013	18.0	0.0	0.0
3	PDA2	0.00	0.00	600.0	0.0040	0.013	12.0	0.0	0.0
4	PDA2	0.00	0.00	855.0	0.0020	0.013	24.0	0.0	0.0
5	PDA3	0.00	0.00	555.0	0.0040	0.013	12.0	0.0	0.0

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Type II 24-hr 1-Year Rainfall=2.10"

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**Time span=5.00-36.00 hrs, dt=0.05 hrs, 621 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method**

Subcatchment PDA1: PDA1 to Audubon Par 3

**Runoff Area=57.340 ac 46.99% Impervious Runoff Depth=1.11"
Flow Length=2,475' Tc=44.0 min CN=89 Runoff=42.30 cfs 5.311 af**

Subcatchment PDA2: PDA2 to Lake

**Runoff Area=86.200 ac 62.78% Impervious Runoff Depth=1.25"
Flow Length=2,155' Tc=42.7 min CN=91 Runoff=73.63 cfs 8.990 af**

Subcatchment PDA3: PDA3 to Pond and Ellcott Creek

**Runoff Area=20.540 ac 40.00% Impervious Runoff Depth=0.98"
Flow Length=1,065' Tc=35.2 min CN=87 Runoff=15.54 cfs 1.685 af**

Subcatchment PDA4: Direct to Ellcott Creek

**Runoff Area=10.860 ac 0.00% Impervious Runoff Depth=0.62"
Flow Length=960' Tc=21.8 min CN=80 Runoff=6.62 cfs 0.565 af**

**Total Runoff Area = 174.940 ac Runoff Volume = 16.551 af Average Runoff Depth = 1.14"
49.97% Pervious = 85.661 ac 51.03% Impervious = 89.279 ac**

Westwood PostDevelopment

Type II 24-hr 1-Year Rainfall=2.10"

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Summary for Subcatchment PDA1: PDA1 to Audubon Par 3

Runoff = 42.30 cfs @ 12.42 hrs, Volume= 5.311 af, Depth= 1.11"

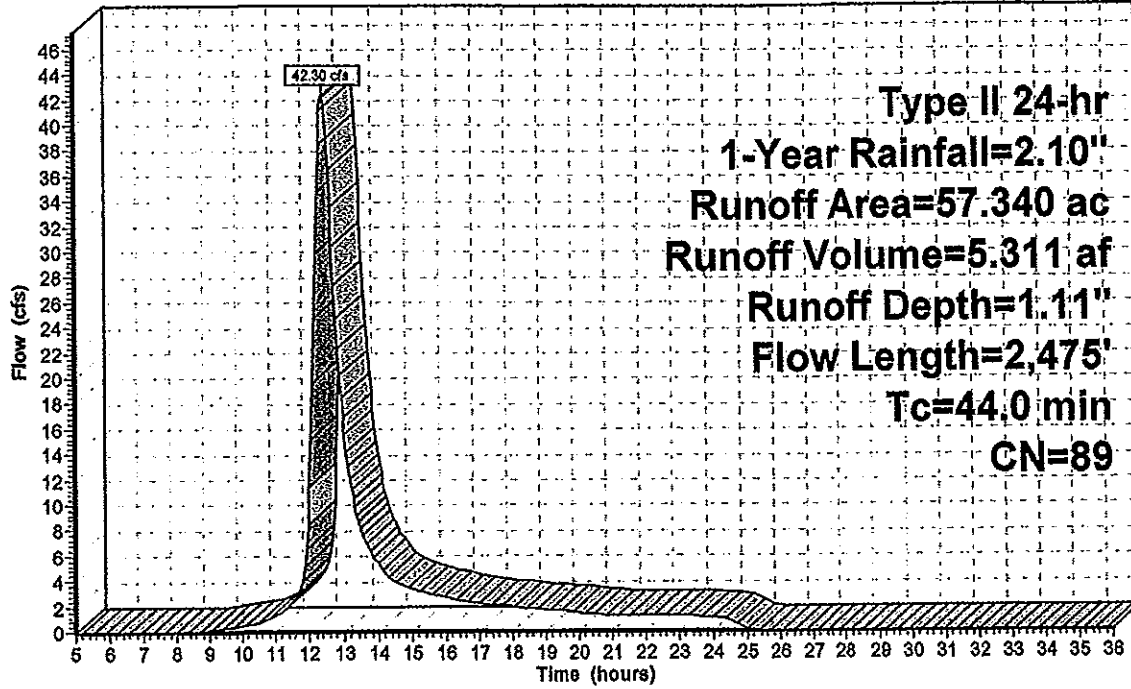
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
 Type II 24-hr 1-Year Rainfall=2.10"

Area (ac)	CN	Description
* 29.500	86	1/3 acre lots, 30% Imp, Townhomes, HSG D
* 27.840	92	1/8 acre lots, 65% Imp, Patio Homes, HSG D
57.340	89	Weighted Average
30.394		53.01% Pervious Area
26.946		46.99% Impervious Area

To (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.7	150	0.0050	0.09		Sheet Flow, A-B Grass: Short n= 0.150 P2= 2.50"
7.7	525	0.0050	1.14		Shallow Concentrated Flow, B-C Unpaved Kv= 16.1 fps
3.5	600	0.0040	2.87	2.25	Pipe Channel, Pipe to Pond and Main Storm Trunk 12.0" Round Area= 0.8 sf Perlm= 3.1' r= 0.25' n= 0.013
6.1	1,200	0.0030	3.26	5.75	Pipe Channel, Main Trunk to Pond and Outlet 18.0" Round Area= 1.8 sf Perlm= 4.7' r= 0.38' n= 0.013
44.0	2,475	Total			

Subcatchment PDA1: PDA1 to Audubon Par 3

Hydrograph



Runoff

Type II 24-hr
1-Year Rainfall=2.10"
Runoff Area=57.340 ac
Runoff Volume=5.311 af
Runoff Depth=1.11"
Flow Length=2,475'
Tc=44.0 min
CN=89

Summary for Subcatchment PDA2: PDA2 to Lake

Runoff = 73.63 cfs @ 12.40 hrs, Volume= 8.990 af, Depth= 1.25"

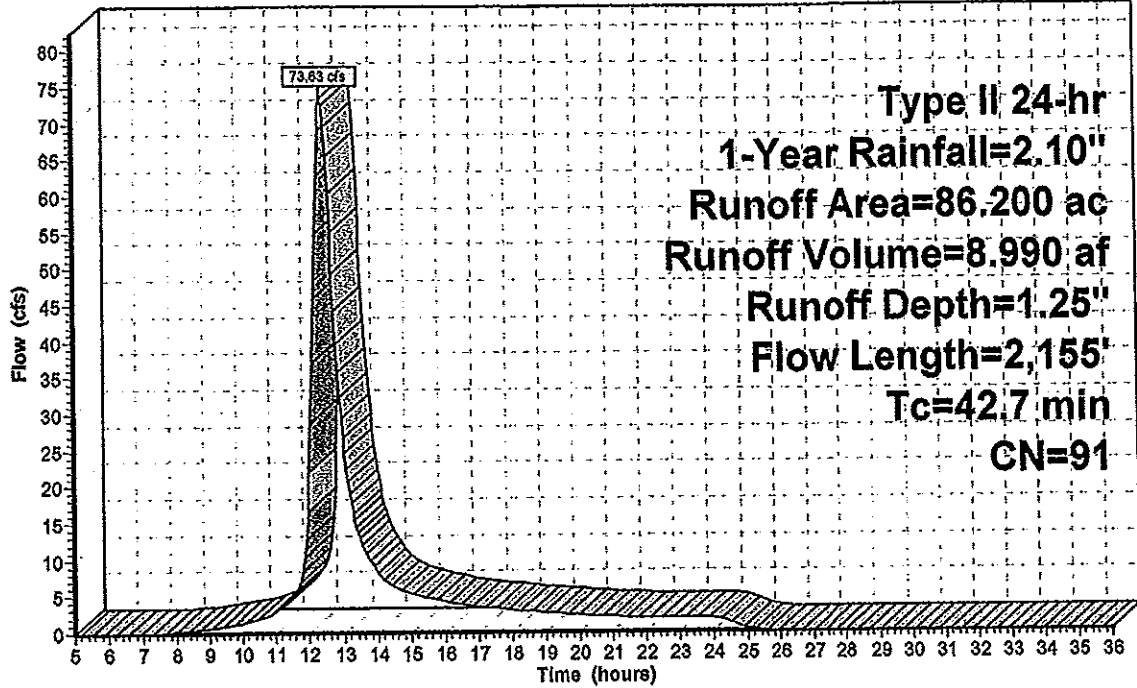
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
 Type II 24-hr 1-Year Rainfall=2.10"

Area (ac)	CN	Description
* 44.750	95	Urban commercial, 85% Imp, Commons, HSG D
* 25.040	87	1/4 acre lots, 38% imp, Single Family Residential, HSG D
* 16.410	87	Senior Housing, 40% Imp, HSG D
86.200	91	Weighted Average
32.083		37.22% Pervious Area
54.117		62.78% Impervious Area

To (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.7	150	0.0050	0.09		Sheet Flow, A-B Grass: Short n= 0.150 P2= 2.50"
8.1	550	0.0050	1.14		Shallow Concentrated Flow, B-C Unpaved Kv= 16.1 fps
3.5	600	0.0040	2.87	2.25	Pipe Channel, Pipe to Main Storm Trunk 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013
4.4	855	0.0020	3.22	10.12	Pipe Channel, Main Storm Trunk to Lake 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013
42.7	2,155	Total			

Subcatchment PDA2: PDA2 to Lake

Hydrograph



Summary for Subcatchment PDA3: PDA3 to Pond and Ellcott Creek

Runoff = 15.54 cfs @ 12.31 hrs, Volume= 1.685 af, Depth= 0.98"

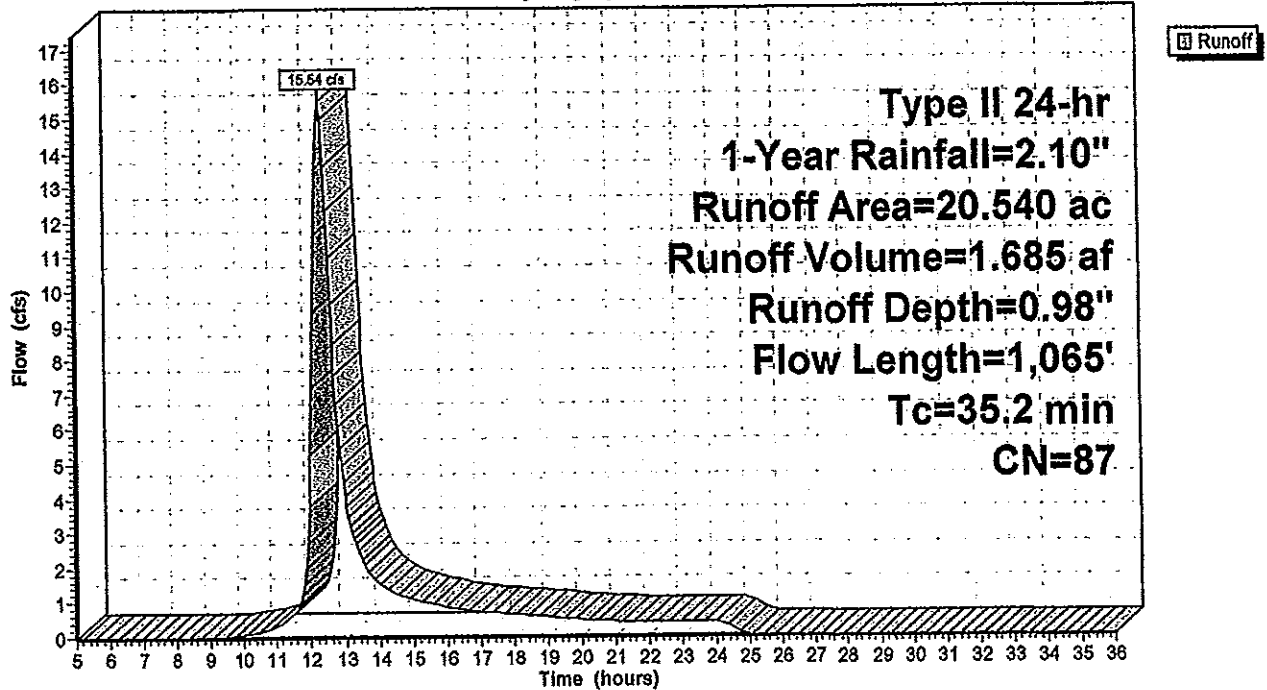
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
 Type II 24-hr 1-Year Rainfall=2.10"

Area (ac)	CN	Description
* 20.540	87	Multifamily, Existing Clubhouse, Open Space, 40% Imp, HSG D
12.324		60.00% Pervious Area
8.216		40.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.7	150	0.0050	0.09		Sheet Flow, A-B Grass: Short n= 0.150 P2= 2.50"
5.3	360	0.0050	1.14		Shallow Concentrated Flow, B-C Unpaved Kv= 16.1 fps
3.2	555	0.0040	2.87	2.25	Pipe Channel, Pipe to Pond 12.0" Round Area= 0.8 sf Perlm= 3.1' r= 0.25' n= 0.013
35.2	1,065	Total			

Subcatchment PDA3: PDA3 to Pond and Ellcott Creek

Hydrograph



Summary for Subcatchment PDA4: Direct to Ellicott Creek

Runoff = 6.62 cfs @ 12.17 hrs, Volume= 0.565 af, Depth= 0.62"

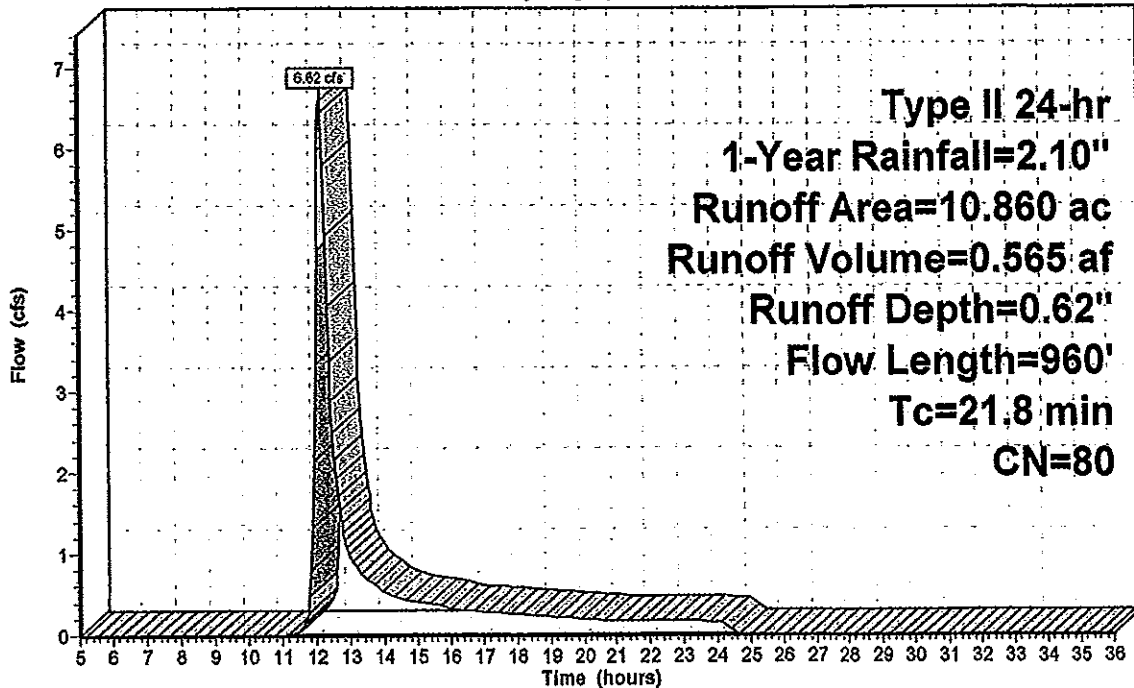
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
 Type II 24-hr 1-Year Rainfall=2.10"

Area (ac)	CN	Description
10.860	80	>75% Grass cover, Good, HSG D
10.860		100.00% Pervious Area

To (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.9	150	0.0600	0.25		Sheet Flow, A-B Grass: Short n= 0.150 P2= 2.50"
11.9	810	0.0050	1.14		Shallow Concentrated Flow, B-C Unpaved Kv= 16.1 fps
21.8	960	Total			

Subcatchment PDA4: Direct to Ellicott Creek

Hydrograph



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Type II 24-hr 10-Year Rainfall=3.50"

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Time span=5.00-36.00 hrs, dt=0.05 hrs, 621 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment PDA1: PDA1 to Audubon Par 3

Runoff Area=57.340 ac 46.99% Impervious Runoff Depth=2.36"
Flow Length=2,475' Tc=44.0 min CN=89 Runoff=90.02 cfs 11.263 af

Subcatchment PDA2: PDA2 to Lake

Runoff Area=86.200 ac 62.78% Impervious Runoff Depth=2.54"
Flow Length=2,155' Tc=42.7 min CN=91 Runoff=148.29 cfs 18.254 af

Subcatchment PDA3: PDA3 to Pond and Ellcott Creek

Runoff Area=20.540 ac 40.00% Impervious Runoff Depth=2.18"
Flow Length=1,065' Tc=35.2 min CN=87 Runoff=34.93 cfs 3.736 af

Subcatchment PDA4: Direct to Ellcott Creek

Runoff Area=10.860 ac 0.00% Impervious Runoff Depth=1.64"
Flow Length=960' Tc=21.8 min CN=80 Runoff=18.60 cfs 1.481 af

Total Runoff Area = 174.940 ac Runoff Volume = 34.734 af Average Runoff Depth = 2.38"
48.97% Pervious = 85.661 ac 51.03% Impervious = 89.279 ac

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Type II 24-hr 10-Year Rainfall=3.50"

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Summary for Subcatchment PDA1: PDA1 to Audubon Par 3

Runoff = 90.02 cfs @ 12.41 hrs, Volume= 11.263 af, Depth= 2.36"

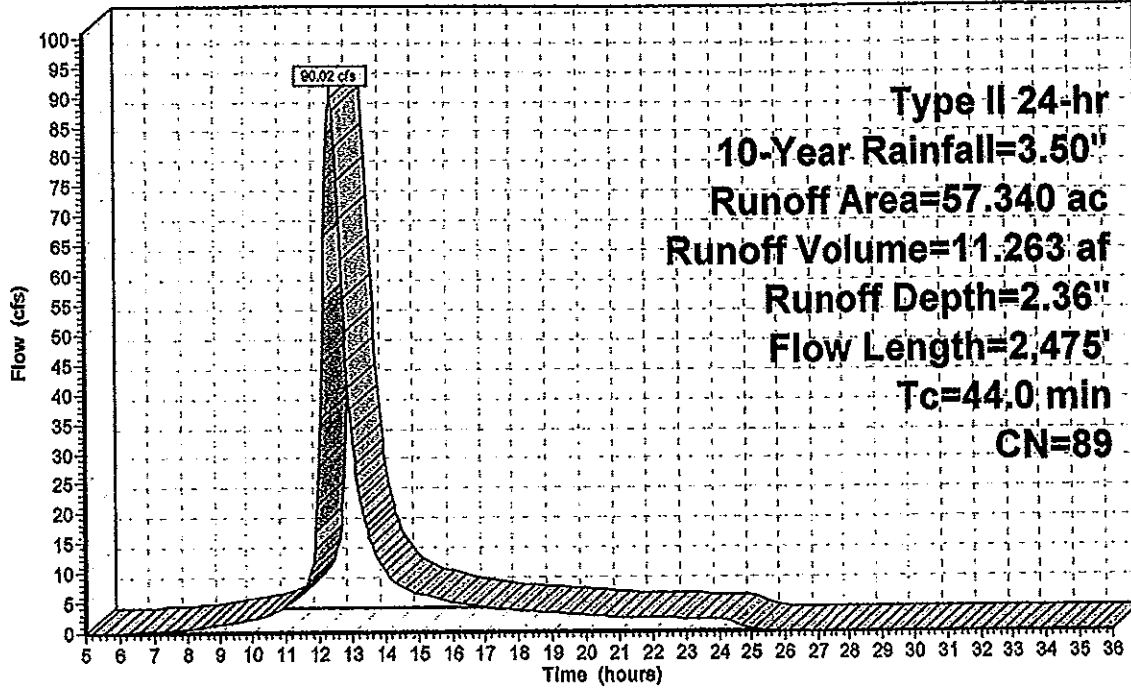
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-Year Rainfall=3.50"

Area (ac)	CN	Description
* 29.500	86	1/3 acre lots, 30% Imp, Townhomes, HSG D
* 27.840	92	1/8 acre lots, 65% Imp, Patio Homes, HSG D
57.340	89	Weighted Average
30.394		53.01% Pervious Area
26.946		46.99% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.7	150	0.0050	0.09		Sheet Flow, A-B Grass: Short n= 0.150 P2= 2.50"
7.7	525	0.0050	1.14		Shallow Concentrated Flow, B-C Unpaved Kv= 16.1 fps
3.5	600	0.0040	2.87	2.25	Pipe Channel, Pipe to Pond and Main Storm Trunk 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013
6.1	1,200	0.0030	3.26	5.75	Pipe Channel, Main Trunk to Pond and Outlet 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013
44.0	2,475	Total			

Subcatchment PDA1: PDA1 to Audubon Par 3

Hydrograph



Summary for Subcatchment PDA2: PDA2 to Lake

Runoff = 148.29 cfs @ 12.39 hrs, Volume= 18.254 af, Depth> 2.54"

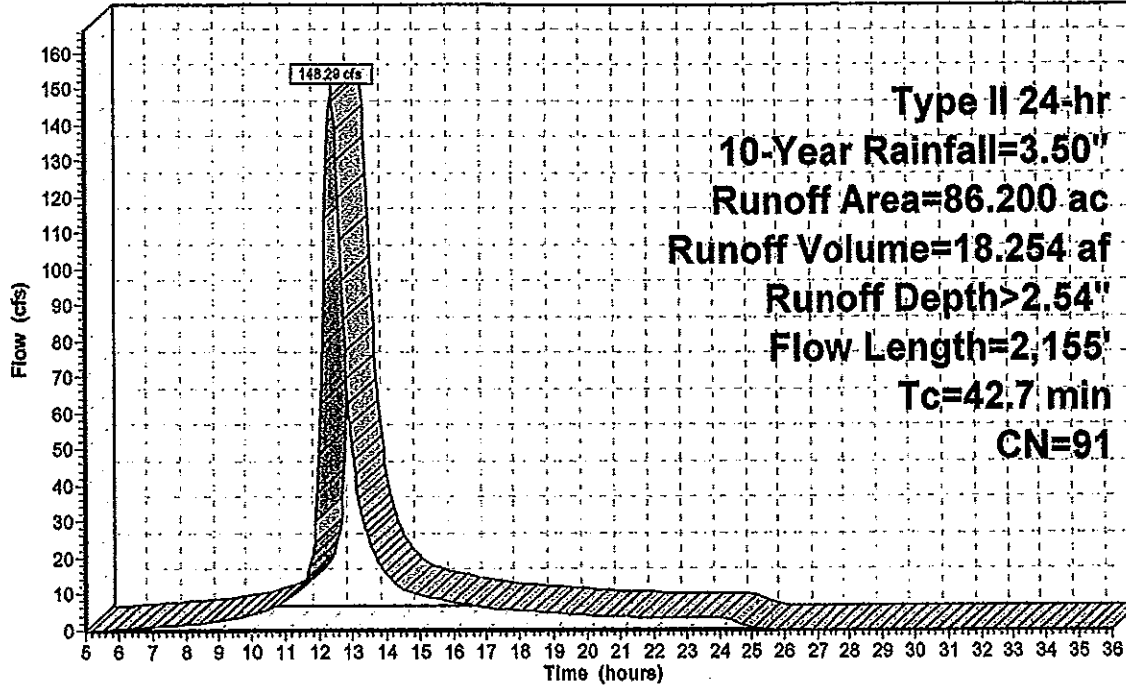
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-Year Rainfall=3.50"

Area (ac)	CN	Description
* 44.750	95	Urban commercial, 85% Imp, Commons, HSG D
* 25.040	87	1/4 acre lots, 38% Imp, Single Family Residential, HSG D
* 16.410	87	Senior Housing, 40% Imp, HSG D
86.200	91	Weighted Average
32.083		37.22% Pervious Area
54.117		62.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.7	150	0.0050	0.09		Sheet Flow, A-B Grass: Short n= 0.150 P2= 2.50"
8.1	550	0.0050	1.14		Shallow Concentrated Flow, B-C Unpaved Kv= 16.1 fps
3.5	600	0.0040	2.87	2.25	Pipe Channel, Pipe to Main Storm Trunk 12.0" Round Area= 0.8 sf Perlm= 3.1' r= 0.25' n= 0.013
4.4	855	0.0020	3.22	10.12	Pipe Channel, Main Storm Trunk to Lake 24.0" Round Area= 3.1 sf Perlm= 6.3' r= 0.50' n= 0.013
42.7	2,155	Total			

Subcatchment PDA2: PDA2 to Lake

Hydrograph



Runoff

Type II 24-hr
10-Year Rainfall=3.50"
Runoff Area=86.200 ac
Runoff Volume=18.254 af
Runoff Depth>2.54"
Flow Length=2,155'
Tc=42.7 min
CN=91

Summary for Subcatchment PDA3: PDA3 to Pond and Ellcott Creek

Runoff = 34.93 cfs @ 12.30 hrs, Volume= 3.736 af, Depth= 2.18"

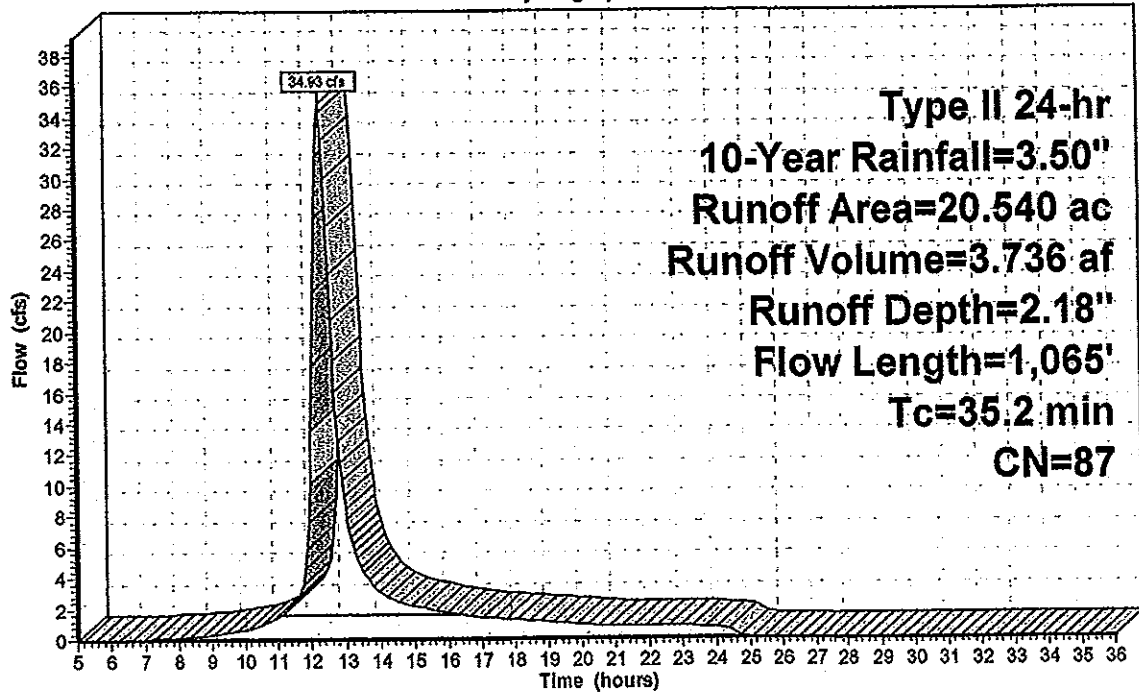
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
 Type II 24-hr 10-Year Rainfall=3.50"

Area (ac)	CN	Description
* 20.540	87	Multifamily, Existing Clubhouse, Open Space, 40% Imp, HSG D
12.324		60.00% Pervious Area
8.216		40.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.7	150	0.0050	0.09		Sheet Flow, A-B Grass: Short n= 0.150 P2= 2.50"
5.3	360	0.0050	1.14		Shallow Concentrated Flow, B-C Unpaved Kv= 16.1 fps
3.2	555	0.0040	2.87	2.25	Pipe Channel, Pipe to Pond 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013
35.2	1,065	Total			

Subcatchment PDA3: PDA3 to Pond and Ellcott Creek

Hydrograph



Summary for Subcatchment PDA4: Direct to Ellcott Creek

Runoff = 18.60 cfs @ 12.15 hrs, Volume= 1.481 af, Depth= 1.64"

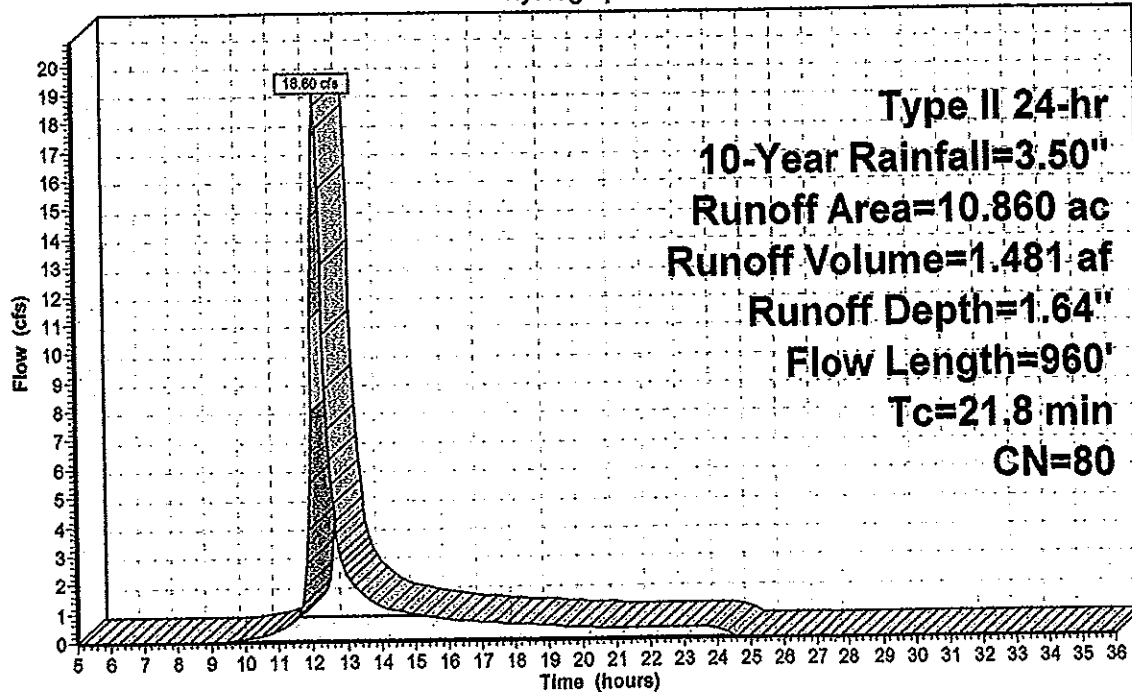
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-Year Rainfall=3.50"

Area (ac)	CN	Description
10.860	80	>75% Grass cover, Good, HSG D
10.860		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.9	150	0.0600	0.25		Sheet Flow, A-B Grass: Short n=0.150 P2=2.50"
11.9	810	0.0050	1.14		Shallow Concentrated Flow, B-C Unpaved Kv=16.1 fps
21.8	960	Total			

Subcatchment PDA4: Direct to Ellcott Creek

Hydrograph



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Type II 24-hr 100-Year Rainfall=4.80"

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Time span=5.00-36.00 hrs, dt=0.05 hrs, 621 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment PDA1: PDA1 to Audubon Par 3

Runoff Area=57.340 ac 46.99% Impervious Runoff Depth>3.58"
Flow Length=2,475' Tc=44.0 min CN=89 Runoff=135.46 cfs 17.109 af

Subcatchment PDA2: PDA2 to Lake

Runoff Area=86.200 ac 62.78% Impervious Runoff Depth>3.78"
Flow Length=2,155' Tc=42.7 min CN=91 Runoff=218.13 cfs 27.188 af

Subcatchment PDA3: PDA3 to Pond and Ellcott Creek

Runoff Area=20.540 ac 40.00% Impervious Runoff Depth=3.38"
Flow Length=1,065' Tc=35.2 min CN=87 Runoff=53.74 cfs 5.784 af

Subcatchment PDA4: Direct to Ellcott Creek

Runoff Area=10.860 ac 0.00% Impervious Runoff Depth=2.72"
Flow Length=960' Tc=21.8 min CN=80 Runoff=31.13 cfs 2.461 af

Total Runoff Area = 174.940 ac Runoff Volume = 52.542 af Average Runoff Depth = 3.60"
48.97% Pervious = 85.661 ac 51.03% Impervious = 89.279 ac

Summary for Subcatchment PDA1: PDA1 to Audubon Par 3

Runoff = 135.46 cfs @ 12.40 hrs, Volume= 17.109 af, Depth> 3.58"

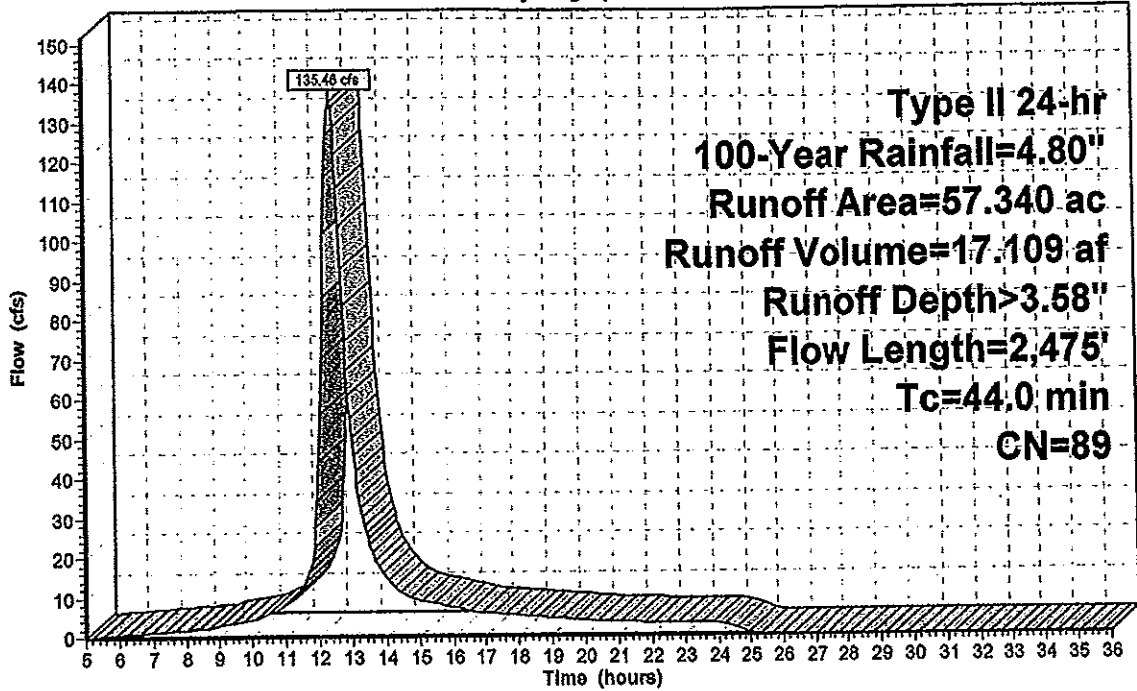
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
 Type II 24-hr 100-Year Rainfall=4.80"

Area (ac)	CN	Description
* 29.500	86	1/3 acre lots, 30% Imp, Townhomes, HSG D
* 27.840	92	1/8 acre lots, 65% Imp, Patio Homes, HSG D
57.340	89	Weighted Average
30.394		53.01% Pervious Area
26.946		46.99% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.7	150	0.0050	0.09		Sheet Flow, A-B Grass: Short n= 0.150 P2= 2.50"
7.7	525	0.0050	1.14		Shallow Concentrated Flow, B-C Unpaved Kv= 16.1 fps
3.5	600	0.0040	2.87	2.25	Pipe Channel, Pipe to Pond and Main Storm Trunk 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013
6.1	1,200	0.0030	3.26	5.75	Pipe Channel, Main Trunk to Pond and Outlet 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013
44.0	2,475	Total			

Subcatchment PDA1: PDA1 to Audubon Par 3

Hydrograph



Runoff

Type II 24-hr
100-Year Rainfall=4.80"
Runoff Area=57.340 ac
Runoff Volume=17.109 af
Runoff Depth>3.58"
Flow Length=2,475'
Tc=44.0 min
CN=89

Summary for Subcatchment PDA2: PDA2 to Lake

Runoff = 218.13 cfs @ 12.39 hrs, Volume= 27.188 af, Depth> 3.78"

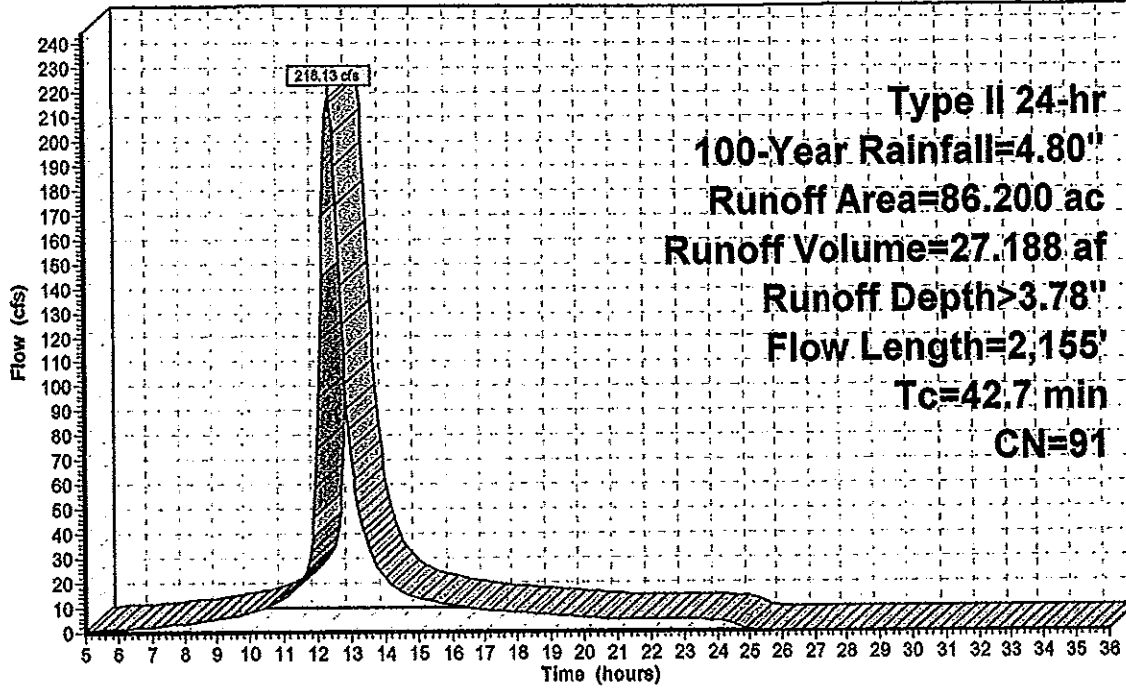
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-Year Rainfall=4.80"

Area (ac)	CN	Description
* 44.750	95	Urban commercial, 85% Imp, Commons, HSG D
* 25.040	87	1/4 acre lots, 38% imp, Single Family Residential, HSG D
* 16.410	87	Senior Housing, 40% Imp, HSG D
86.200	91	Weighted Average
32.083		37.22% Pervious Area
54.117		62.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.7	150	0.0050	0.09		Sheet Flow, A-B Grass: Short n= 0.150 P2= 2.50"
8.1	550	0.0050	1.14		Shallow Concentrated Flow, B-C Unpaved Kv= 16.1 fps
3.5	600	0.0040	2.87	2.25	Pipe Channel, Pipe to Main Storm Trunk 12.0" Round Area= 0.8 sf Perlm= 3.1' r= 0.25' n= 0.013
4.4	865	0.0020	3.22	10.12	Pipe Channel, Main Storm Trunk to Lake 24.0" Round Area= 3.1 sf Perlm= 6.3' r= 0.50' n= 0.013
42.7	2,155	Total			

Subcatchment PDA2: PDA2 to Lake

Hydrograph



Runoff

Summary for Subcatchment PDA3: PDA3 to Pond and Ellcott Creek

Runoff = 53.74 cfs @ 12.30 hrs, Volume= 5.784 af, Depth= 3.38"

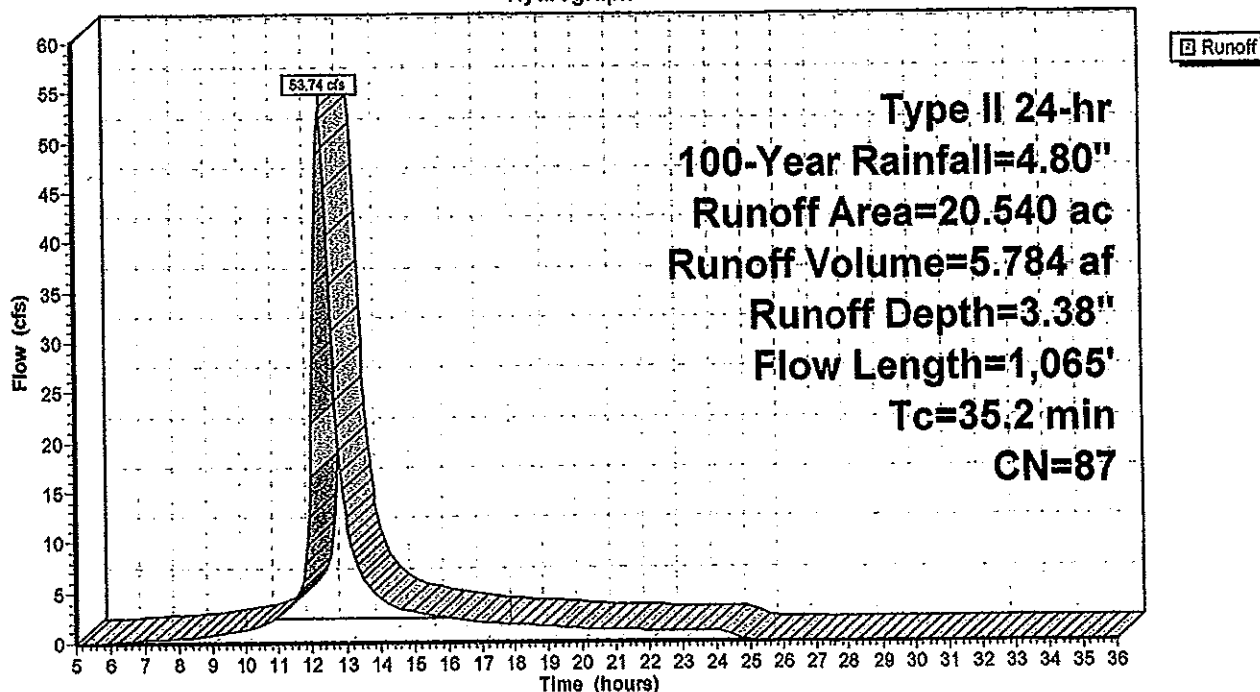
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
 Type II 24-hr 100-Year Rainfall=4.80"

Area (ac)	CN	Description
* 20.540	87	Multifamily, Existing Clubhouse, Open Space, 40% Imp, HSG D
12.324		60.00% Pervious Area
8.216		40.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.7	150	0.0050	0.09		Sheet Flow, A-B Grass: Short n= 0.150 P2= 2.50"
5.3	360	0.0050	1.14		Shallow Concentrated Flow, B-C Unpaved Kv= 16.1 fps
3.2	555	0.0040	2.87	2.25	Pipe Channel, Pipe to Pond 12.0" Round Area= 0.8 sf Perlm= 3.1' r= 0.25' n= 0.013
35.2	1,065	Total			

Subcatchment PDA3: PDA3 to Pond and Ellcott Creek

Hydrograph



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Type II 24-hr 100-Year Rainfall=4.80"

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Summary for Subcatchment PDA4: Direct to Ellicott Creek

Runoff = 31.13 cfs @ 12.15 hrs, Volume= 2.461 af, Depth= 2.72"

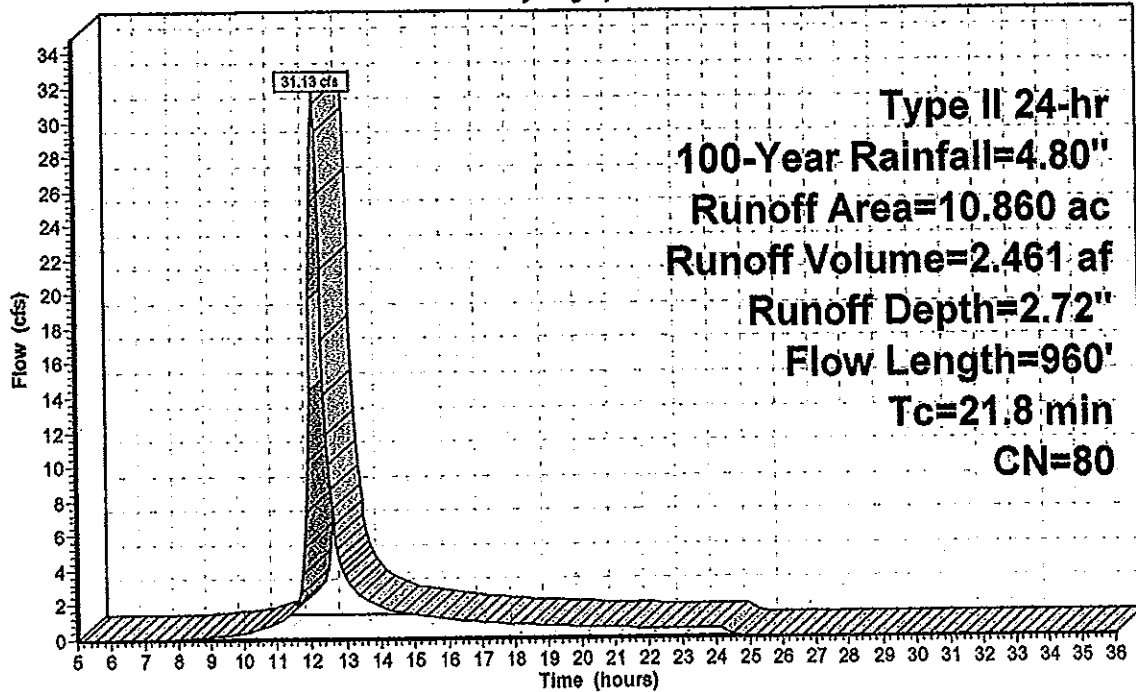
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-Year Rainfall=4.80"

Area (ac)	CN	Description
10.860	80	>75% Grass cover, Good, HSG D
10.860		100.00% Pervious Area

To (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.9	150	0.0600	0.25		Sheet Flow, A-B Grass: Short n= 0.150 P2= 2.50"
11.9	810	0.0050	1.14		Shallow Concentrated Flow, B-C Unpaved Kv= 16.1 fps
21.8	960	Total			

Subcatchment PDA4: Direct to Ellicott Creek

Hydrograph



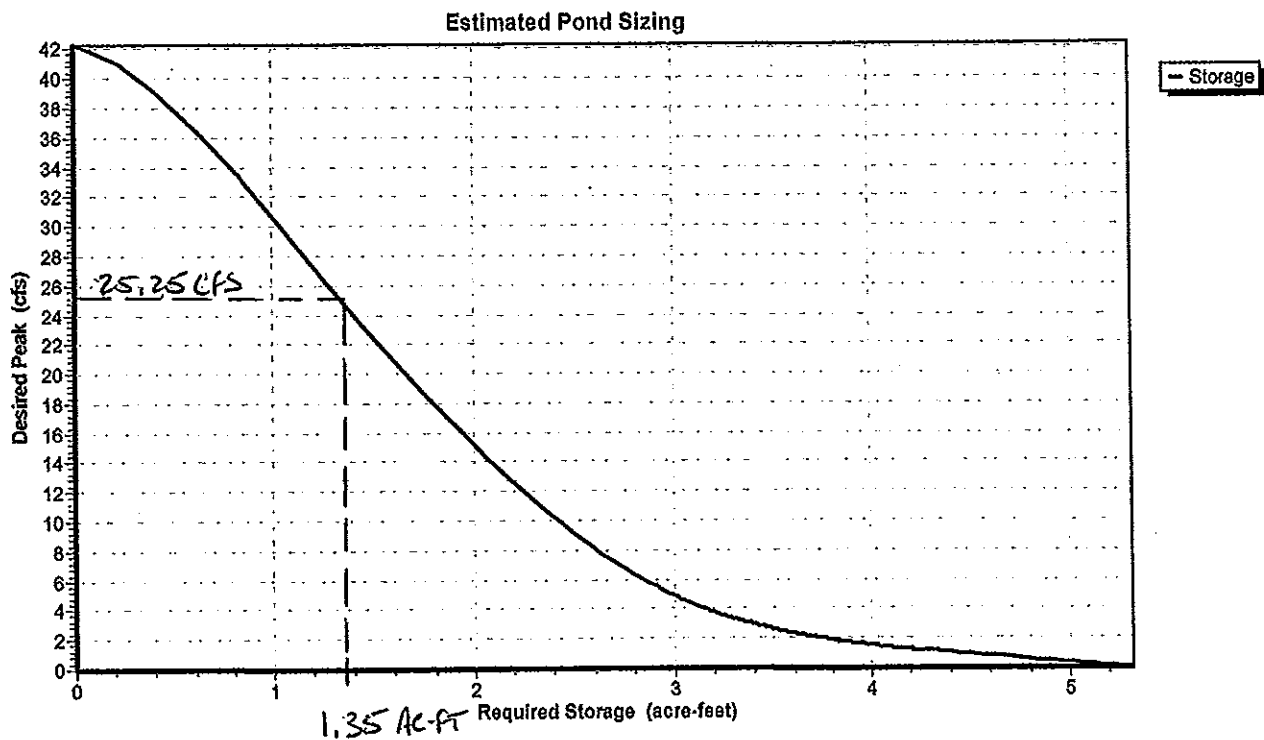
APPENDIX C

STORAGE REQUIREMENT ESTIMATES

Pond 1P: Discharge - Audubon Par 3

PDA1 - 1YR STORM

MAXIMUM ALLOWABLE DISCHARGE RATE = 25.25 CFS TOTAL



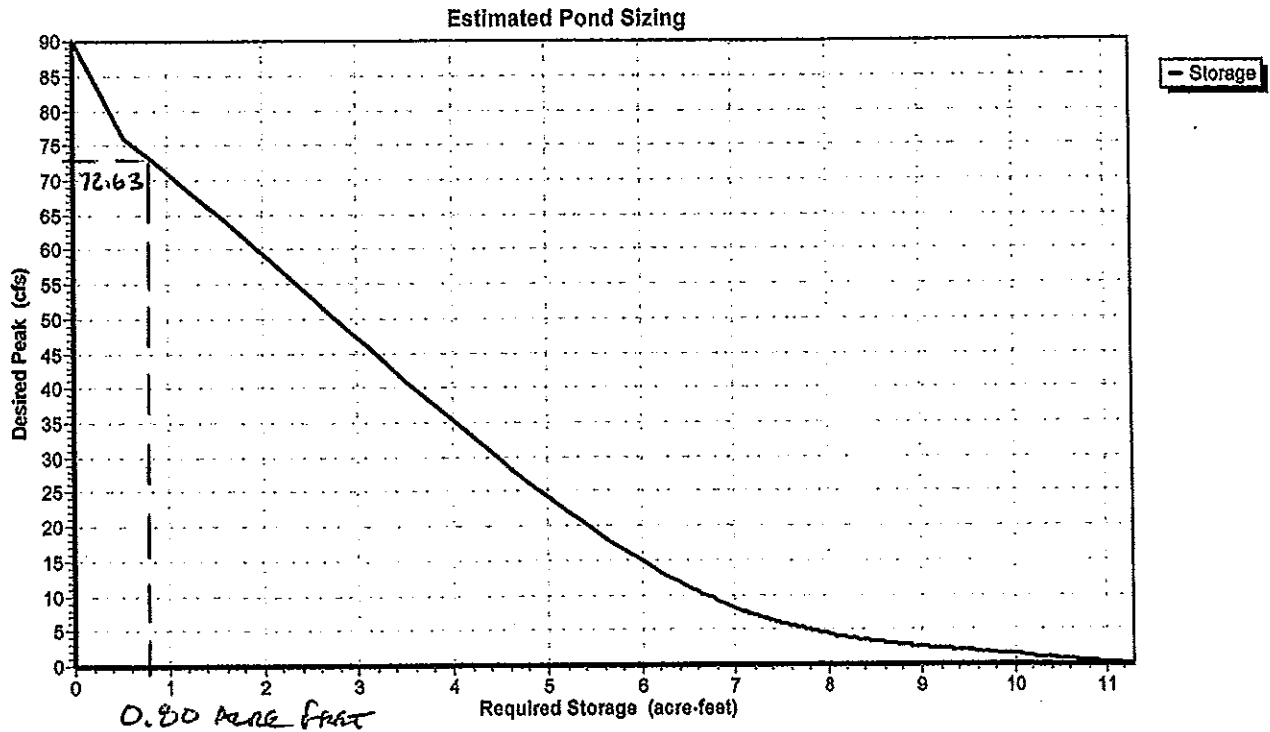
MINIMUM OF 1.35 AC-FT OF STORAGE REQUIRED WITHIN PDA1 FOR 1-YR STORM

* FURTHER DETAILED INVESTIGATION REQUIRED TO DETERMINE DRAINAGE CONVEYANCE PATTERNS AND CAPACITIES OFF SITE TO FELLOW CREEK.

Pond 1P: Discharge - Audubon Par 3

PDA 1 - 10-yr Storm

Maximum Allowable Discharge Rate = 72.63 cfs Total



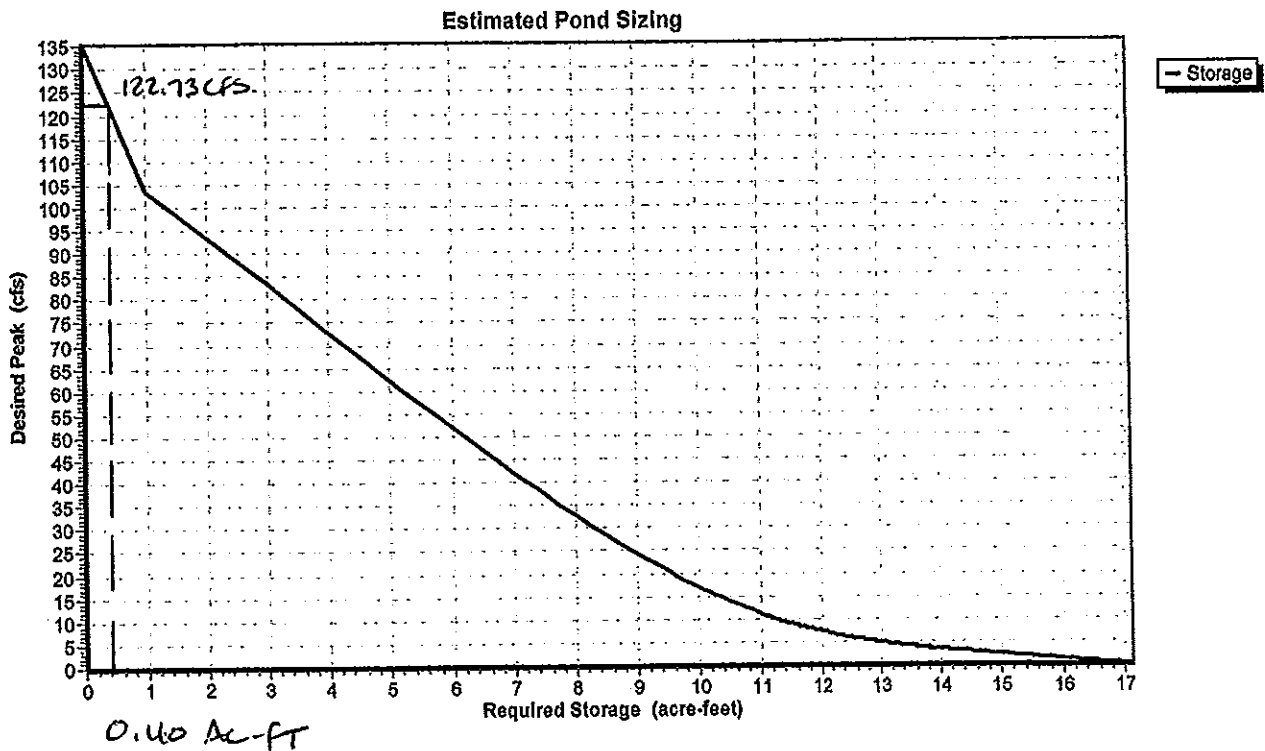
Minimum of 0.80 AC FT of storage required within PDA 1 for 10-yr storm

* Further detailed investigation required to determine drainage conveyance patterns and capacities off site to Elliott Creek.

Pond 1P: Discharge - Audubon Par 3

PDA1 - 100-yr Storm

Maximum Available Discharge Rate = 122.73 cfs. Total



Minimum of 0.46 ac-ft of storage required within PDA1 for 100-yr storm

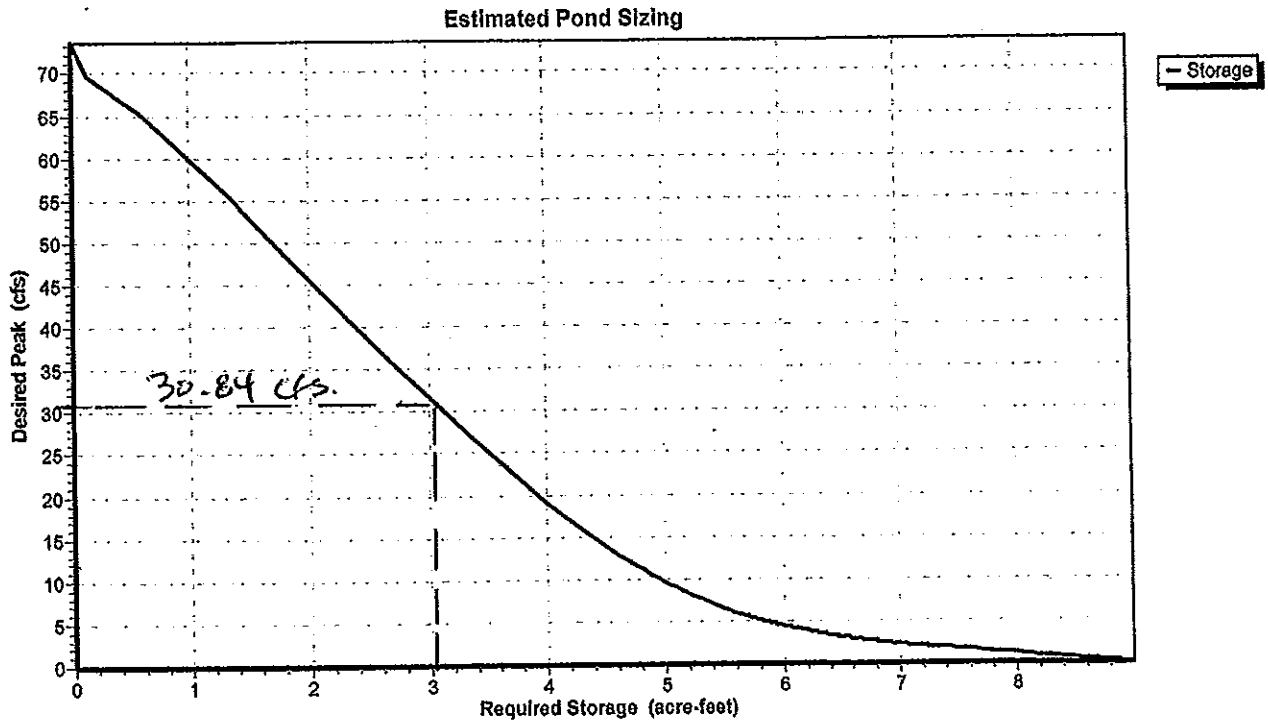
* Further detailed investigation required to determine drainage conveyance patterns and capacities off-site to Elkoot Creek.

Pond 2P: Lake - Discharge to Ellcott Creek

POA 2 - 1-YR STORM

* MAXIMUM ALLOWABLE DISCHARGE RATE = 30.84 CFS TOTAL

* BALANCE OF REMAINING ALLOWABLE DISCHARGE FROM SITE.



3.1 ac-ft

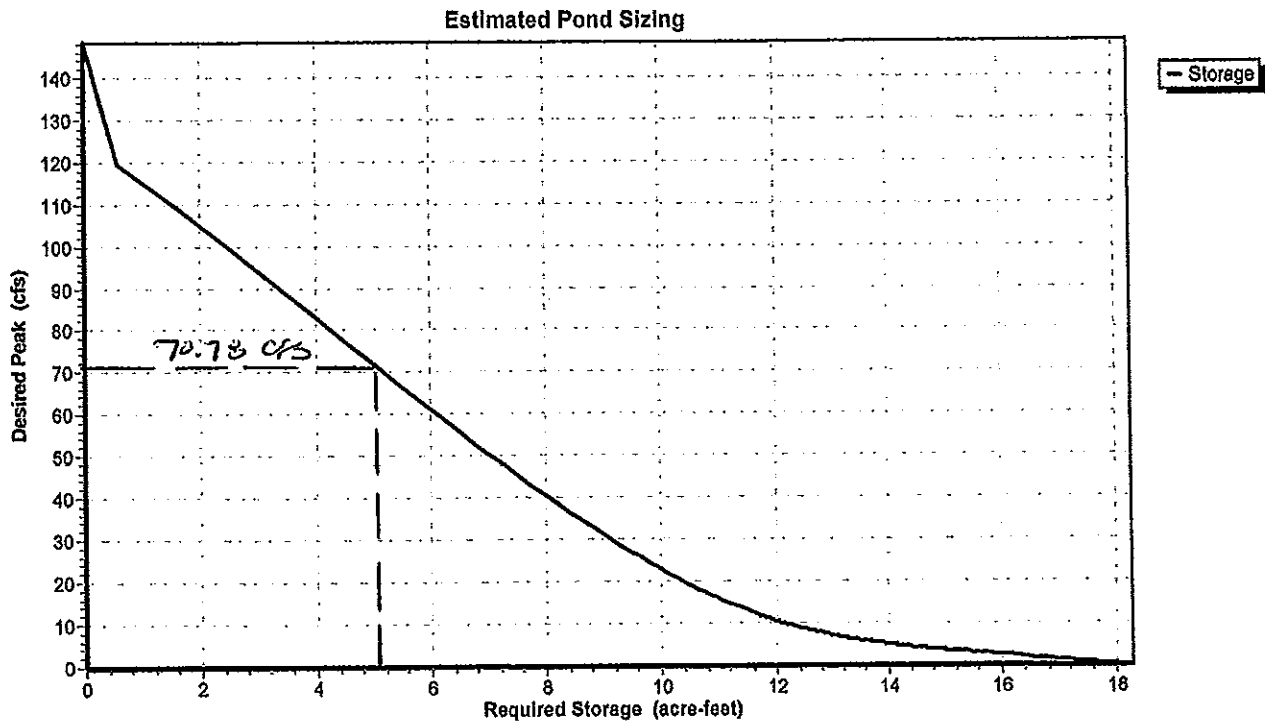
MINIMUM OF 3.1 ac-ft OF STORAGE REQUIRED IN POA 2 FOR 1-YR STORM

Pond 2P: Lake - Discharge to Ellicott Creek

POA2 - 10-yr Storm

* MAXIMUM ALLOWABLE DISCHARGE RATE = 70.78 CFS TOTAL

* BALANCE OF REMAINING ALLOWABLE DISCHARGE FROM SITE.



5.1 AC-FT

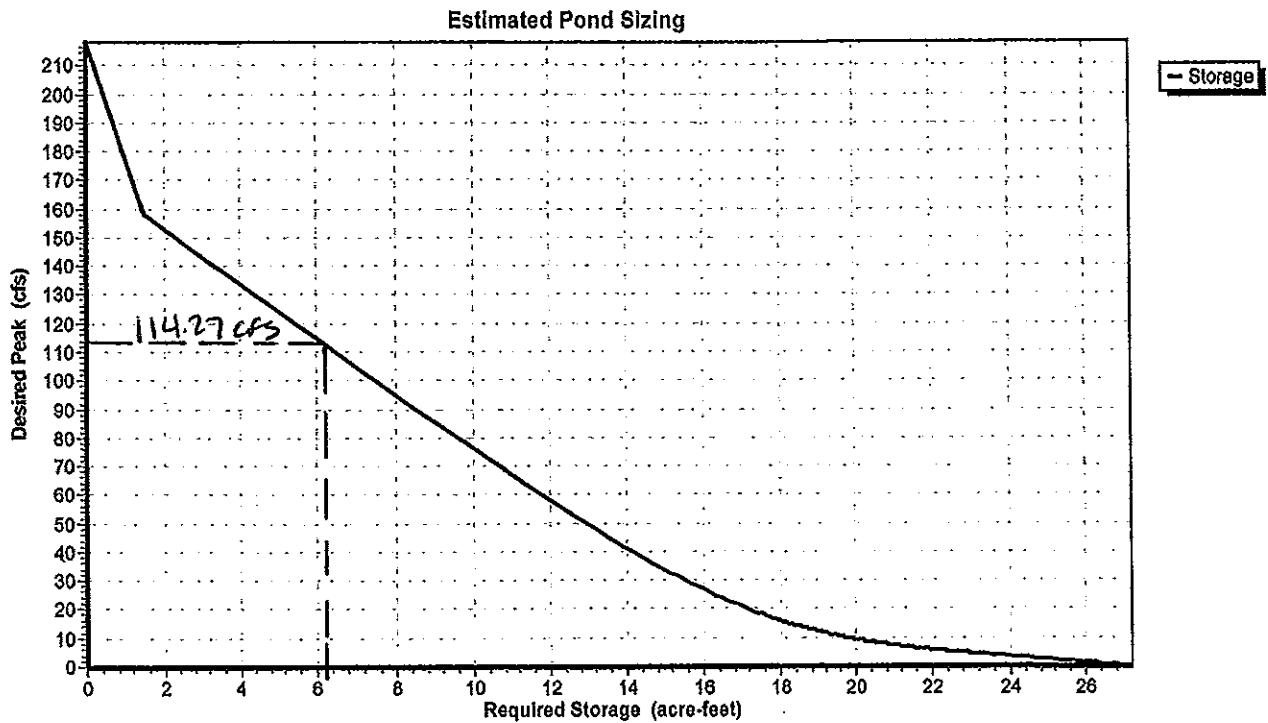
Minimum of 5.1 AC-FT OF STORAGE REQUIRED WITHIN POA2 FOR 10-yr STORM

Pond 2P: Lake - Discharge to Ellcott Creek

POAZ - 100 yr Storm

* Maximum Allowable Discharge Rate = 114.27 cfs Total

* Balance of Remaining Allowable Discharge From Site.



6.3 Ac-FT

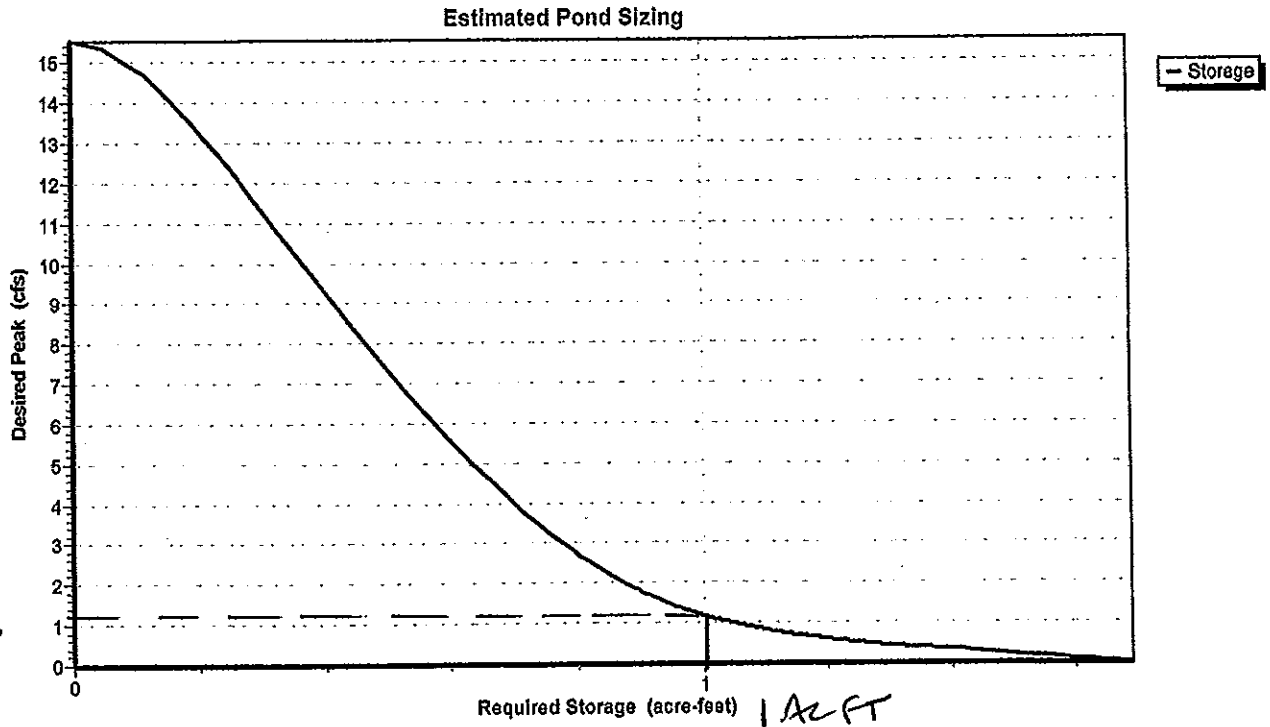
Minimum of 6.3 Ac-FT of Storage Required Within POAZ For 100-yr Storm

Pond 3P: Discharge to Ellicott Creek

POA 3 - 1-yr Storm

* MAXIMUM ALLOWABLE DISCHARGE RATE = 1.2 cfs

* BASED ON 1.0 AC-FT STORAGE



1.2 cfs

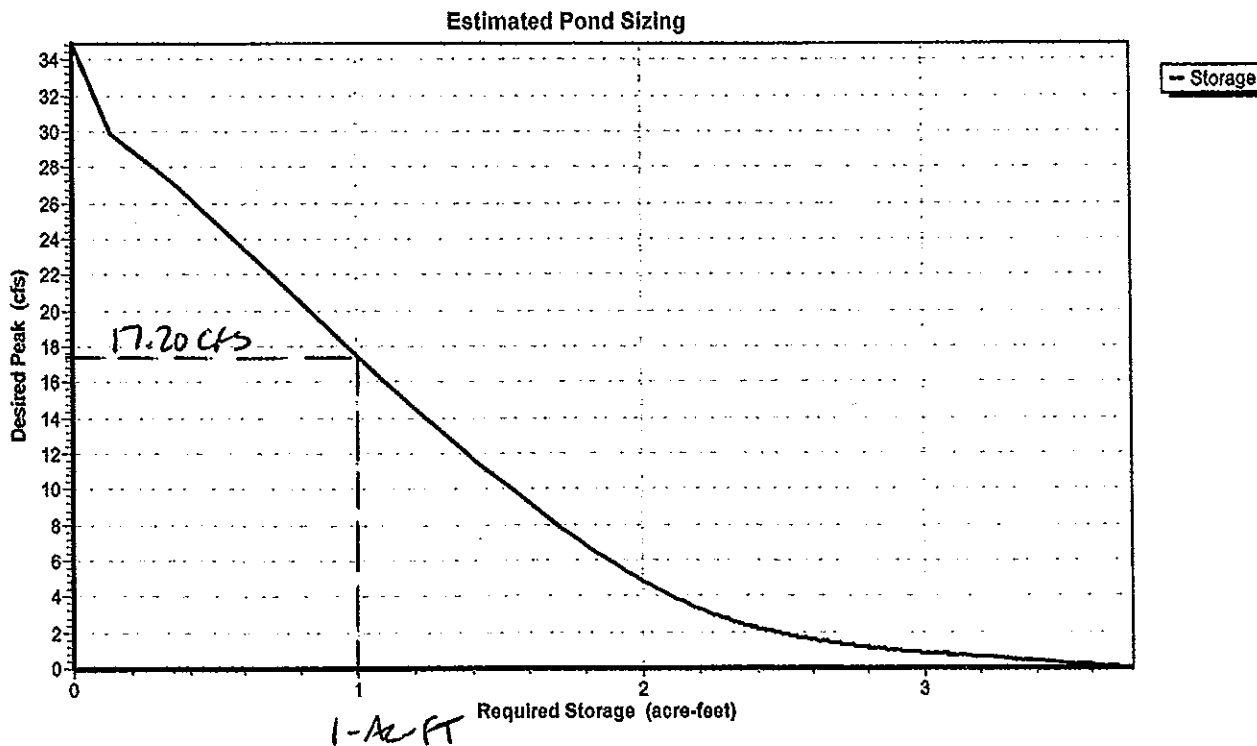
1 AC FT OF STORAGE PROVIDED.

Pond 3P: Discharge to Ellcott Creek

PDA3 - 10-yr Storm

* Maximum Allowable Discharge Rate = 17.20 cfs

* BASED ON 1.0 AC-FT OF STORAGE



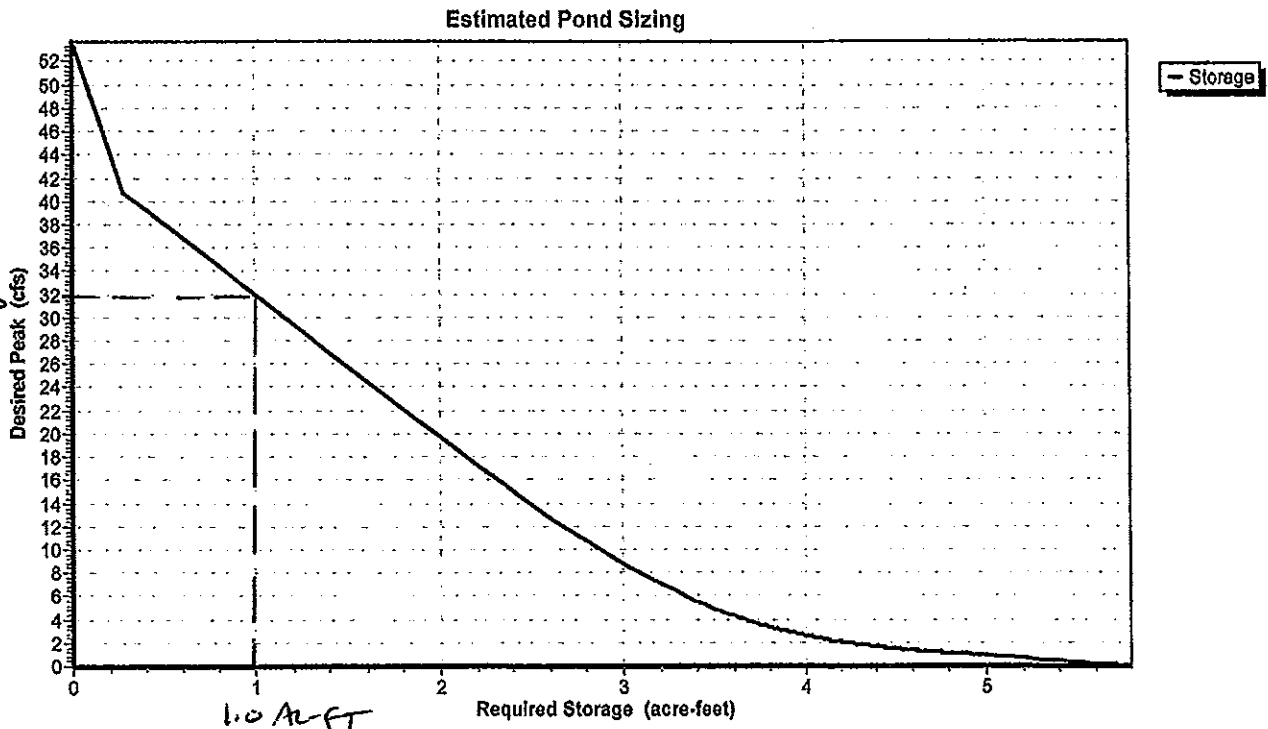
1 AC-FT OF STORAGE PROVIDED.

Pond 3P: Discharge to Ellicott Creek

PDA3 - 100-yr Storm

* Maximum Allowable Discharge Rate = 32.0 cfs

* Based on 1.0 ac-ft of Storage



1.0 ac-ft of storage provided.

Summary for Subcatchment PDA4: Direct to Ellcott Creek

Runoff = 6.62 cfs @ 12.17 hrs, Volume= 0.565 af, Depth= 0.62"

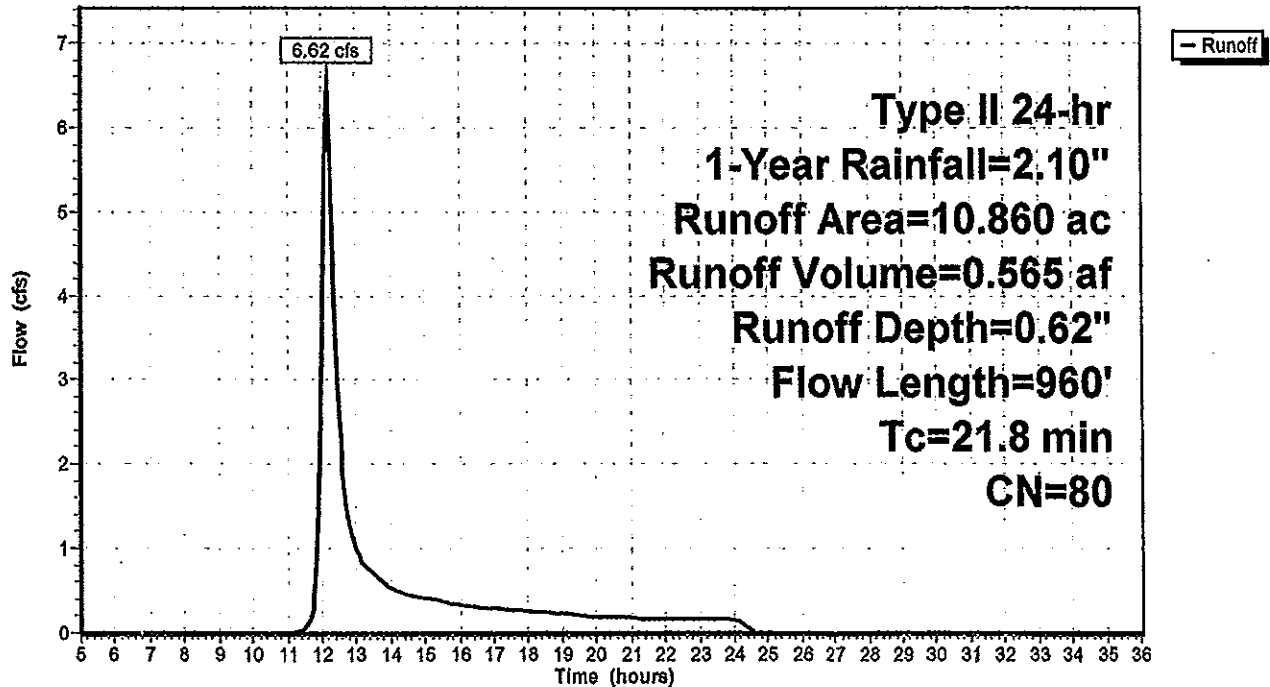
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
 Type II 24-hr 1-Year Rainfall=2.10"

Area (ac)	CN	Description
10.860	80	>75% Grass cover, Good, HSG D
10.860		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.9	150	0.0600	0.25		Sheet Flow, A-B Grass: Short n= 0.150 P2= 2.50"
11.9	810	0.0050	1.14		Shallow Concentrated Flow, B-C Unpaved Kv= 16.1 fps
21.8	960	Total			

Subcatchment PDA4: Direct to Ellcott Creek

Hydrograph



Summary for Subcatchment PDA4: Direct to Ellcott Creek

Runoff = 18.60 cfs @ 12.15 hrs, Volume= 1.481 af, Depth= 1.64"

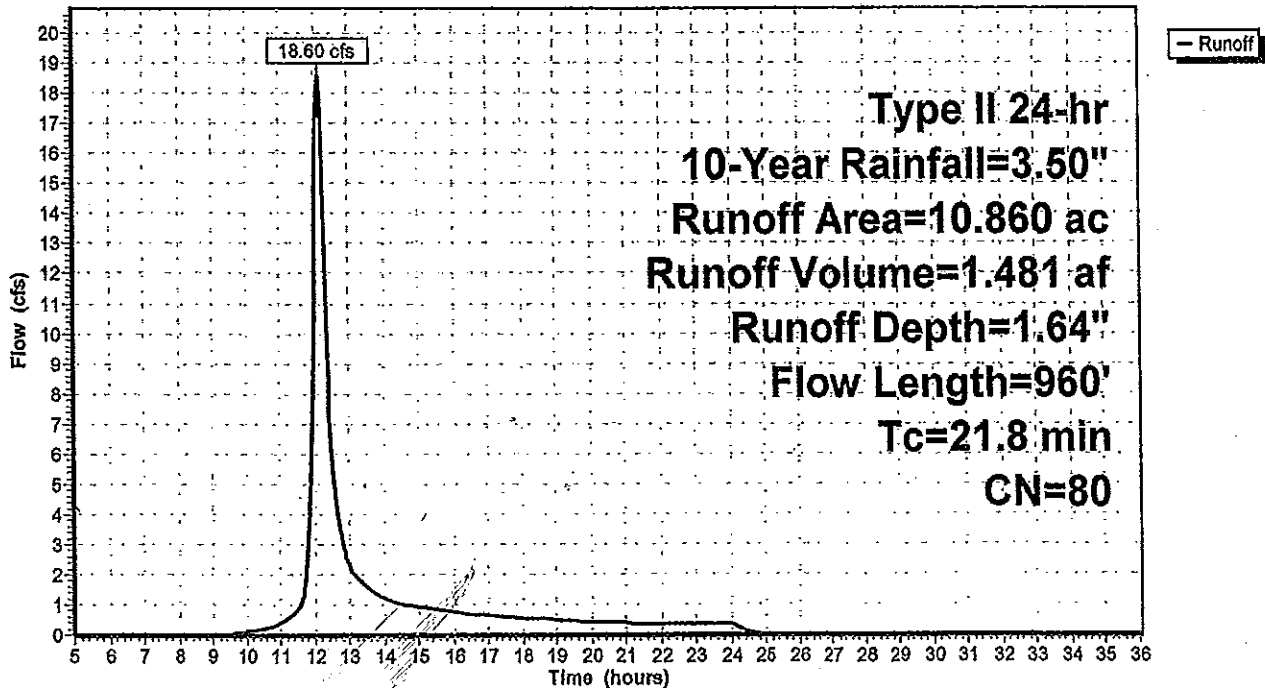
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
 Type II 24-hr 10-Year Rainfall=3.50"

Area (ac)	CN	Description
10.860	80	>75% Grass cover, Good, HSG D
10.860		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.9	150	0.0600	0.25		Sheet Flow, A-B Grass: Short n= 0.150 P2= 2.50"
11.9	810	0.0050	1.14		Shallow Concentrated Flow, B-C Unpaved Kv= 16.1 fps
21.8	960	Total			

Subcatchment PDA4: Direct to Ellcott Creek

Hydrograph



Summary for Subcatchment PDA4: Direct to Ellcott Creek

Runoff = 31.13 cfs @ 12.15 hrs, Volume= 2.461 af, Depth= 2.72"

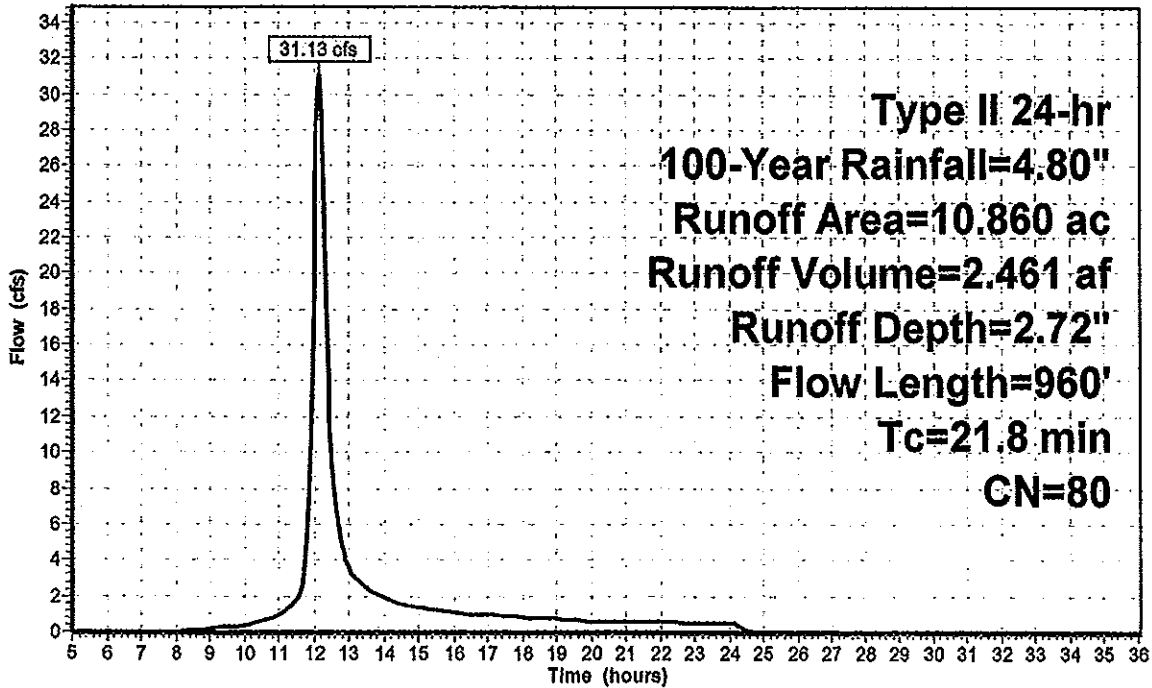
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-36.00 hrs, dt= 0.05 hrs
 Type II 24-hr 100-Year Rainfall=4.80"

Area (ac)	CN	Description
10.860	80	>75% Grass cover, Good, HSG D
10.860		100.00% Pervious Area

To (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.9	150	0.0600	0.25		Sheet Flow, A-B Grass: Short n= 0.150 P2= 2.50"
11.9	810	0.0050	1.14		Shallow Concentrated Flow, B-C Unpaved Kv= 16.1 fps
21.8	960	Total			

Subcatchment PDA4: Direct to Ellcott Creek

Hydrograph



— Runoff

Type II 24-hr
 100-Year Rainfall=4.80"
 Runoff Area=10.860 ac
 Runoff Volume=2.461 af
 Runoff Depth=2.72"
 Flow Length=960'
 Tc=21.8 min
 CN=80

Traffic Impact Study

for the proposed

Westwood Mixed Use Neighborhood

**Town of Amherst
Erie County, New York**

Project No. 33042

April 2014

Prepared For:

Mensch Capital Partners. LLC

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Prepared By:



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Rochester, New York 14623

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ALTERNATIVE CONCEPT PLANS

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4. NCHRP Report 279, Intersection Channelization Design Guide. Transportation Research Board. 1985.
5. Trip Generation, Ninth Edition. Institute of Transportation Engineers. Washington D.C. 2012.
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EXECUTIVE SUMMARY

OVERVIEW

The purpose of this report is to identify and evaluate the potential traffic impacts associated with the proposed Westwood mixed use neighborhood in the Town of Amherst, New York. In an effort to define the potential traffic impacts, this analysis determines the extent of existing traffic conditions, projects background traffic flow including area growth, and projects changes in traffic flow due to the proposed mixed use neighborhood.

This Traffic Impact Study (“TIS”) has been requested by Mensch Capital Partners, LLC in association with its preparation of a Draft Generic Environmental Impact Statement (“DGEIS”) which will include a comprehensive analysis of the potential environmental impacts of the proposed mixed use project. This report includes an analysis of the potential traffic impacts of the “alternatives” to the proposed project mixed use development of the project site. In an effort to thoroughly consider and properly analyze the potential traffic impacts associated with alternative concept plans, a capacity analysis has been performed by our firm for each of the alternative design plans. The results of the DGEIS alternative design plans are included in the Appendices.

The project site is bounded by Maple Road to the north; the Audubon Par 3 Golf Course, Ellicott Creek, and North Forest Road to the east; Sheridan Drive to the south; and Frankhauser Road and Fairways Boulevard to the west. The project site is currently occupied by the Westwood Country Club with a private 18-hole golf course on approximately 170 acres. The proposed mixed use neighborhood consists of the following land uses:

- Mixed-use Village Square
 - 115,000 SF commercial component
 - Apartments – 352 units
- Condominium Town Home Development – 90 units
- Patio Home Subdivision – 108 lots
- Single Family Home Subdivision – 46 lots
- Office Park (generally medical offices) – 200,000 SF
- Senior Living
 - Assisted Living – 200 units
 - Independent Living Apartments – 96 units
- Rental Town Home Development – 93 units
- Hotel – 130 rooms

Access to the proposed mixed use neighborhood will be provided via a new north/south public Town roadway between Maple Road and Sheridan Drive forming a new “T” intersection on Maple Road. The new roadway will intersect Sheridan Drive opposite Fenwick Road. Additionally, a right-in/right-out/left-in only driveway will be installed along Sheridan Drive between Fenwick Road and North Forest Road.

Construction of the proposed development is anticipated to reach full build-out in approximately 10 years and the build-out will occur over multiple phases. However, for purposes of this study, our firm’s analysis takes into account the full development of the project site. Town of Amherst officials were contacted to discuss projects within the study area that are under construction and/or approved. No developments are currently anticipated within the nearby vicinity. To account for normal increases in background traffic growth, including any

unforeseen developments in the project study area, a growth rate of 0.25% per year has been applied to the existing traffic volumes, based upon historical traffic growth derived from New York State Department of Transportation (“NYSDOT”) and Greater Buffalo-Niagara GBNRTC traffic volume projections for the area, for the 10-year build-out period.

The operating characteristics of the site access roads and impacts to the adjacent roadway network are identified and mitigating measures, if any, are provided to minimize any capacity or safety concerns.

CONCLUSIONS & RECOMMENDATIONS

This Traffic Impact Study identifies and evaluates the potential traffic impacts resulting from full build-out of the proposed Westwood Country Club Development. Based upon this analysis, the results indicate that the proposed development can be accommodated by the existing roadway network with the following recommendations in place. The following sets forth conclusions and recommendations based upon the results of the analyses:

1. The proposed development is expected to generate approximately 1,033 (1,274) new trips during the AM (PM) peak hours respectively.
2. A left-turn lane warrant investigation was conducted along Maple Road and Sheridan Drive at the proposed driveways. However, two-way left-turn facilities already exist at the location of the proposed access roads. The two-way left-turn lanes should be restriped to accommodate dedicated left-turn lanes entering the proposed driveway along Maple Road, the existing Sheridan Drive/Fenwick Road intersection, and proposed limited access driveway along Sheridan Drive.
3. A right-turn lane investigation was conducted along Maple Road and Sheridan Drive at the proposed driveway locations, including the proposed limited access driveway on Sheridan Drive. While the future volumes satisfy the right-turn lane guidelines at the intersection of Maple Road and the proposed driveway under full development during the AM and PM peak hours, no improvement is recommended given the location of adjacent residential properties. Right-turn guidelines were satisfied during both peak hours at the intersections of the Sheridan Drive/Fenwick Road/Proposed Driveway and Sheridan Drive/Proposed Right-in Right-out only Driveway. The right turn lanes should provide 425’ of storage space with a 75’ taper.
4. Install a new traffic signal at the proposed full access public roadway on Sheridan Drive when the driveway is constructed. The signal should be coordinated with the existing traffic signal network along Sheridan Drive to the west of the project site.
5. Install a new traffic signal at the proposed full access public roadway connection on Maple Road when the driveway is constructed.
6. The proposed full access public roadway on Sheridan Drive should be designed to provide two lanes of exiting traffic and two lanes of entering traffic to both facilitate traffic movements and to achieve the desired alignment with the existing Fenwick Road. The throat length of the driveway should be designed to accommodate vehicle queues exiting the site and reduce vehicle blockages of internal circulation roadways; therefore a minimum uninterrupted throat length of 200 ft is recommended.

7. Internal sidewalks should form an inter-connected network allowing users to actively walk amongst the various land use components to be included in the mixed use neighborhood. Additionally, internal paved recreational paths should be designed and installed to encourage bicycle use.
8. The southern portion of the proposed mixed use neighborhood consisting of the commercial, higher density residential, and the hotel components should incorporate bicycle parking and related facilities into the design. Such facilities should include bike racks and consideration can be given to providing bike lockers, shower and changing facilities within one or more of the proposed buildings.
9. Transportation demand management (TDM) strategies should be considered and implemented when practical to reduce off-site vehicular trips.
10. Consideration should be given to reducing the number of parking spaces constructed on-site given the mixed-use nature of the neighborhood, potential for non-vehicular trips, and the potential for shared parking between non-competing uses.

I. INTRODUCTION

The purpose of this TIS is to identify and evaluate the potential traffic impacts associated with the proposed Westwood Country Club Development in the Town of Amherst, New York. The operating characteristics of the proposed access points and impacts to the adjacent roadway network are identified.

This Traffic Impact Study has been requested by Mensch Capital Partners, LLC in association with the development of a Draft Generic Environmental Impact Statement (DGEIS) which will include the consideration of alternative concept design plans for the Westwood project site. In an effort to thoroughly consider and properly analyze the potential traffic impacts associated with alternative concept design plans, a capacity analysis is performed for the alternative design plans. The results of the DGEIS alternative design plans are included in the Appendices.

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

II. LOCATION

The project site is located between Maple Road and Sheridan Drive, west of North Forest Road and east of Fairways Boulevard in the Town of Amherst, Erie County, New York. The site location and study area are shown in **Figure I – Site Location and Study Area** (all figures are included at the end of this report).

The site is currently occupied by the Westwood Country Club, a private 18-hole golf course on approximately 170 acres. The project site is bounded by: Maple Road to the north; the Audubon Par 3 Golf Course, Ellicott Creek, and North Forest Road to the east; Sheridan Drive to the south; and Frankhauser Road and Fairways Boulevard to the west. In order to ensure a comprehensive analysis of potential traffic impacts, a broad study area was selected consisting of the following 14 existing intersections:

1. Maple Road/Millersport Hwy SB
2. Maple Road/Millersport Hwy NB
3. Maple Road/S. Maplemere Road
4. Maple Road/Sandhurst Lane
5. Maple Road/DonnaLea Boulevard
6. Maple Road/N. Forest Road
7. Sheridan Drive/Mill Street
8. Sheridan Drive/N. Forest Road
9. Sheridan Drive/Fenwick Road
10. Sheridan Drive/Frankhauser Road
11. Sheridan Drive/I-290 NB
12. Sheridan Drive/Harlem Road
13. Harlem Road/I-290 SB
14. N. Forest Road/Existing Country Club Driveway

III. EXISTING HIGHWAY SYSTEM

A. Existing Transportation Facilities

Maple Road (CR 192) is functionally classified as an urban principal arterial roadway under the jurisdiction of Erie County Department of Public Works (“ECDPW”). Within the study area, motorists travel east and west using two travel lanes in each direction, a center two-way left-turn lane (2WLTL) and auxiliary turn lanes at the intersections with Millersport Highway, South Maplemere Road, and North Forest Road. Within the study area, Annual Average Daily Traffic (AADT) on Maple Road is approximately 21,913 vehicles per day (“vpd”) according to the most recent traffic counts collected by the New York State Department of Transportation (“NYSDOT”) in 2010. The posted speed limit is 45 miles per hour (“MPH”).

Sheridan Drive (NY 324) is functionally classified as an urban principal arterial roadway under the jurisdiction of the NYSDOT. Within the study area, motorists travel east and west using two travel lanes in each direction, a 2WLTL, and auxiliary turn lanes at the intersections with Harlem Road, I-290, Frankhauser Road, Fenwick Road, North Forest Road, and Mill Street. The AADT on Sheridan Drive is approximately 39,724 vpd according to the most recent traffic counts collected by NYSDOT in 2011. The posted speed limit is 45 MPH.

North Forest Road (CR 294) is functionally classified as a minor arterial roadway, under the jurisdiction of the ECDPW. Within the study area, motorists travel north and south using one travel lane in each direction with auxiliary turn lanes at the intersections of Maple Road and Sheridan Drive. The AADT on North Forest Road is approximately 13,550 vpd according to the most recent traffic counts collected by the Greater Buffalo-Niagara Regional Transportation Council (GBNRTC) in 2008. The posted speed limit is 30 MPH.

Harlem Road (NY 240) is functionally classified as an urban minor arterial roadway under the jurisdiction of the NYSDOT. Within the study area, motorists travel north and south using two travel lanes in each direction and auxiliary turn lanes at the intersections with Sheridan Drive and I-290. The AADT on Harlem Road is approximately 11,003 vpd, according to the most recent traffic counts collected by NYSDOT in 2011. The posted speed limit is 35 MPH.

Existing AADT information was obtained from the NYSDOT [Traffic Data Viewer](#), NYSDOT [Traffic Data Report](#), and GBNRTC [Highway Database](#). **Figure 2** illustrates the lane geometry at each of the study intersections and the AADT volumes on the study roadways.

B. Planned/Programmed Highway Improvements

The NYSDOT and the ECDPW were contacted to determine if there are any planned/future highway improvements on the roadways within the project study area. There were no ECDPW projects identified within the study area. The NYSDOT has indicated there is an in-development plan for a regional arterial management system along Sheridan Drive. The project involves the coordination of the traffic signals along the highway.

IV. EXISTING TRAFFIC CONDITIONS

A. Peak Intervals for Analysis

Given the functional characteristics of the land uses proposed for the site (residential; senior living; commercial/retail; office; and hotel), the peak hours selected for analysis are the weekday commuter AM and PM peaks. The combination of site traffic and adjacent through traffic produces the greatest demand during these time periods.

B. Existing Traffic Volume Data

Weekday AM (7:00-9:00AM) and PM (4:00-6:00PM) peak hour volumes were collected by SRF & Associates (SRF) at the study area intersections listed in Section II above.

Turning movement count data was collected by SRF at the study intersections on varying dates including February 1st, 2011; Wednesday, November 14th, 2012; Thursday, November 15th, 2012; Wednesday, September 11th, 2013; and Thursday, September 12th, 2013. All turning movement count data were collected on typical weekdays while local schools and colleges were in session. The traffic volumes were reviewed to confirm the accuracy and relative balance of the collective traffic counts. All traffic volumes were found to balance within the network within reasonable and expected variations and adjustments were made where necessary to derive 2013 Existing Conditions. The peak hour traffic periods generally occurred between 7:45 - 8:45 AM and 4:30 - 5:30 PM at the study intersections.

The 2013 weekday AM and PM peak hour existing traffic volumes are reflected in **Figure 3**.

C. Field Observations

The study intersections were observed during both peak intervals to assess current traffic operations. Signal timing information was collected to determine peak hour phasing plans and phase durations during each interval.

D. Accident Investigation

An accident investigation was completed to assess the safety history at the fourteen existing study intersections. Crash data was compiled from March 2010 through February 2013. The data was obtained from NYSDOT.

A total of 165 accidents were documented at the 14 intersections during the investigation period (3 years). The severity of the 165 documented accidents is as follows:

- 82 – Reportable – Injury
- 61 – Reportable – Non Injury
- 22 – Non Reportable/Unknown

Accident rates were computed for the project study intersections and compared with the NYSDOT average accident rates for similar intersections, as summarized in the following table. Intersection rates are listed as accidents per million entering vehicles (“Acc/MEV”).

TABLE I: INTERSECTION ACCIDENT RATES

Intersection	Number of Accidents	Actual Project Rate Acc/MEV	NYSDOT Average Rate Acc/MEV
Maple Road/Maplemere Road	11	0.43	0.17
Maple Road/Sandhurst Lane	0	0.00	0.12
Maple Road/Donna Lea Boulevard	2	0.08	0.12
Maple Road/North Forest Road	43	1.09	0.17
North Forest Road/Westwood C.C. Driveway	1	0.07	0.13
Harlem Road/I-290 SB Off/on-ramp	5	0.22	0.13
Millersport Highway NB Off/on-ramp/Maple Road	1	0.04	0.13
Millersport Highway SB Off/on-ramp/Maple Road	0	0.00	0.13
Sheridan Drive/North Forest Road	31	0.62	0.17
Sheridan Drive/Fenwick Road	2	0.06	0.13
Sheridan Drive/Frankhauser Road	3	0.08	0.13
Sheridan Drive/Harlem Road	27	0.66	0.13
Sheridan Drive/I-290 Off/on-ramp	16	0.38	0.13
Sheridan Drive/Mill Street	23	0.65	0.13

As shown in **Table I**, seven of the fourteen study intersections have accident rates higher than the state wide average accident rates for similar intersections. The intersection of Maple Road/North Forest Road has an accident rate that is significantly higher than the state average. The majority of accidents at this intersection are rear end and left turn accidents.

Due to the fact that the intersection accidents have rates that exceed state averages, further investigation was performed to identify high incident areas and possible trends/causes of the accidents. The results of the investigation are discussed in the following section.

Maple Road/Maplemere Road:

A total of 11 accidents were documented during the investigation period (3 years). Rear end (5) and right angle (5) accidents accounted for the majority of the accidents at this location. Four of the right angle crashes occurred in the westbound direction. Three rear end accidents occurred in the eastbound direction with two occurring in the westbound direction. The remaining accident was categorized as other (1).

Maple Road/North Forest Road:

A total of 43 accidents were documented at this intersection. The calculated accident rate is over 6 times higher than the statewide average for other similar intersections. Rear end (14) and left turn (12) accidents accounted for the majority of the accidents at this location. The remaining accidents were categorized as other (5), right angle (4), fixed object (3), bicycle/pedestrian (2), overtaking (2), and right turn (1). Notable accident clusters – locations greater than three (3) identifiable consistent accident patterns – at this location include:

- 6 left turn collisions (southbound)
- 4 rear end collisions (northbound)
- 3 rear end collisions (southbound)
- 3 rear end collisions (eastbound)
- 3 right angle collisions (southbound)

Harlem Road/290 SB Off/on-ramp:

A total of five accidents were documented at this intersection. Rear end (2) and left turn (2) accidents accounted for the majority of the accidents at this location. The remaining accident was categorized as right angle (1).

Sheridan Drive/North Forest Road:

A total of 31 accidents were documented at this intersection during the 3-year investigation period. The calculated accident rate is over 3.5 times higher than the statewide average for other similar intersections. Rear end (20) accidents accounted for the majority of the accidents. The remaining accidents were categorized as left turn (3), right turn (3), right angle (1), side-swipe (1), fixed object (1), bicycle/pedestrian (1), and other (1). Notable accident clusters at this location include:

- 8 rear end collisions (eastbound)
- 4 rear end collisions (southbound)
- 4 rear end collisions (westbound)
- 3 rear end collisions (unknown)

Sheridan Drive/Harlem Road:

A total of 27 accidents were documented at this intersection. The calculated accident rate is approximately 5 times higher than the statewide average for other similar intersections. Rear end (11) and left turn (11) accidents accounted for the majority of the accidents. The remaining accidents were categorized as right angle (3), overtaking (1), and fixed object (1). Notable accident clusters at this location include:

- 6 rear end collisions (eastbound)
- 3 rear end collisions (northbound)
- 6 left turn collisions (northbound)
- 5 left turn collisions (westbound)

Sheridan Drive/290 Off/on-ramp:

A total of 16 accidents were documented at this intersection. Rear end (5) accidents accounted for the majority of the accidents. The remaining accidents were categorized as left turn (3), right angle (3), overtaking (2), head on (1), side-swipe (1), and animal (1). Notable accident clusters at this location include:

- 4 rear end collisions (westbound)
- 3 right angle collisions (northbound)

Sheridan Drive/Mill Street:

A total of 16 accidents were documented at this intersection. The calculated accident rate is approximately 5 times higher than the statewide average for other similar intersections. Rear end (10) accidents accounted for the majority of the accidents. The remaining accidents were categorized as right angle (8), left turn (2), fixed object (1), animal (1), and other (1). Notable accident clusters at this location include:

- 7 rear end collisions (eastbound)
- 4 right angle collisions (westbound)
- 3 right angle collisions (eastbound)

Most accidents were caused by either driver inattention, following too closely, or failure to yield to the right of way. Human error contributing factors were the most prevalent causes of the accidents.

Additional traffic from the proposed development may increase the potential for collisions. Based upon the crash details at each intersection, there are identifiable patterns of rear-end collisions. These types of collisions are more common at traffic signals on high volume roadways. Recommended mitigation countermeasures may include optimizing the change intervals at the traffic signals (to increase the length of time between phase intervals) and/or signal coordination.

V. FUTURE AREA DEVELOPMENT AND LOCAL GROWTH

Construction of the proposed mixed use neighborhood is anticipated to reach full build-out in approximately 10 years and to occur over multiple phases. However, for purposes of this study the analysis takes into account full development of the site. Town of Amherst officials were contacted to discuss projects within the study area that are under construction and/or approved. No developments are anticipated within the nearby vicinity.

To account for normal increases in background traffic growth, including any unforeseen developments in the project study area, a growth rate of 0.25% per year has been applied to the existing traffic volumes, based upon historical traffic growth derived from NYSDOT and GBNRTC traffic volume projections for the area, for the 10-year build-out period. The background traffic volumes are depicted in **Figure 4**.

VI. PROPOSED DEVELOPMENT

A. Description

The project site is currently occupied by the Westwood Country Club with an 18-hole golf course on approximately 170 acres. The proposed development consists of the following land uses:

- Mixed-use Village Square
 - 115,000 SF commercial component
 - Apartments – 352 units
- Condominium Town Home Development – 90 units
- Patio Home Subdivision – 108 lots
- Single Family Home Subdivision – 46 lots
- Office Park (generally medical offices) – 200,000 SF
- Senior Living
 - Assisted Living – 200 units
 - Independent Living Apartments – 96 units
- Rental Town Home Development – 93 units
- Hotel – 130 units

Access to the proposed Westwood Country Club Development will be provided via a new north/south roadway that will be dedicated to the Town to become a new public highway between Maple Road and Sheridan Drive. The northerly access point will form a new “T” intersection at Maple Road. The southerly access will intersect Sheridan Drive at the existing Fenwick Road intersection. Additionally, a new right-in/right-out/left-in only driveway will be constructed along Sheridan Drive between Fenwick Road and North Forest Road. **Figure 5** illustrates the proposed concept site plan.

The proposed development site will have frontage along Maple Road and Sheridan Drive. Both roadways currently have pedestrian sidewalks on each side of the road. In addition, Route #49 of the Niagara Frontier Transportation Authority (NFTA) metro-bus system operates along Sheridan Drive.

The proposed development should take advantage of the existing pedestrian infrastructure system in place along Maple Road and Sheridan Drive. Internally, sidewalks should form an inter-connected network allowing users to actively walk amongst the various land uses. Additionally, internal circulation routes designed to encourage bicycle use can promote a more active lifestyle. The southern portion of the proposed site plan consisting of the commercial, higher density residential, and hotel components should incorporate bicycle parking and related facilities into the design. Such facilities can be bike racks and bike lockers to providing shower and changing facilities within the proposed buildings. Bicycle signage along the main north/south internal roadway can be used to increase driver’s awareness of bicyclists as well as encourage bicycle ridership. Implementing, to the extent practicable, pedestrian and bicycle design features into the proposed mixed use neighborhood can encourage a healthy, active lifestyle encouraging reduced vehicle trips generated by the site.

B. Site Traffic Generation

The next step in the evaluation is to determine the volume of traffic attributable to the Project as defined by vehicle trips entering and exiting the site. Trip generation is an estimate of the number of trips generated by a specific building or land use. These trips represent the volume of traffic entering and exiting the development. The Trip Generation, 9th Edition is used as a reference for this information and is the accepted standard for determining the projected traffic volumes for a project. The trip rate for the peak hour of the generator may or may not coincide in time or volume with the trip rate for the peak hour of adjacent street traffic. Volumes generated during the peak hour of adjacent street traffic, in this case the weekday AM and PM commuter peaks, represent a more critical volume when analyzing the capacity of the system, and as such those intervals will provide the basis of this analysis.

The volume of traffic generated by a site is dependent on the intended land use and size of the development. The volume of site-generated traffic has been estimated based on ITE rates, as shown in **Table I**. All trip generation calculations are included in the Appendix.

TABLE I: SITE GENERATED TRIPS

DESCRIPTION	SIZE/ UNITS	AM PEAK		PM PEAK	
		ENTER	EXIT	ENTER	EXIT
Single Family Residential	46 Units	11	31	33	19
Patio Homes	108 Units	21	64	71	42
Condominium Town Homes	90 Units	8	39	37	18
Rental Town Home	93 Units	21	44	34	33
Apartments	352 Units	35	141	137	74
Assisted Living	200 Units	18	10	19	25
Senior Housing	96 Units	6	13	14	11
Hotel	130 Rooms*	33	24	29	31
Medical-Dental Office	200,000 SF	378	100	200	514
Commercial/Retail	115,000 SF	105	65	316	342
Total Projected Driveway Trips		636	531	890	1109

* Average occupancy rate is 65%. Therefore, 85 occupied rooms was used as the variable for trip generation purposes.

Five alternative concept plans were evaluated, in addition to the preferred Conceptual Master Plan, as part of our firm's analysis. This report uses the project layout as depicted on the Conceptual Master Plan as the basis for analysis. A comparison of the alternative concept plans and their related trip generation estimates are depicted in **Table II**.

TABLE II: TRIP GENERATION COMPARISON FOR ALTERNATIVE SITE PLANS

DESCRIPTION	AM PEAK		PM PEAK	
	ENTER	EXIT	ENTER	EXIT
Alternative 1	95	108	142	150
Alternative 2	68	202	216	127
Alternative 3	272	297	994	961
Alternative 4	1228	251	202	1142
Alternative 5	657	543	953	1178

C. Determination of Multi-use and Pass-by Trips

Inherent in the trip generation estimate for the proposed development, is the "multi-use" traffic component of traffic entering and exiting the site. According to the Institute of Transportation Engineers, *Trip Generation Handbook*, 2001, "...a multi-use development is typically a single real-estate project that consists of two or more ITE land use classifications between which trips can be made without using the off-site road system. Because of the nature of these land uses, the trip-making characteristics are interrelated, and some trips are made among the on-site uses. This capture of trips internal to the site has the net effect of reducing vehicle trip generation between

the overall development site and the external street system (compared to the total number of trips generated by comparable, standalone sites).” “In some multi-use developments, these internal trips can be made by walking or by vehicles entirely on internal pathways or internal roadways without using streets external to the site.”

The ITE Trip Generation Handbook indicates internal capture rates for trips within a multi-use development to vary between office, residential, and retail uses during the AM and PM peak hours. Given the area in which the project site is located, the proposed office, residential, and retail components, and interconnection between internal adjacent parcels, multi-use (or multiple purpose) total volume trips are likely to occur. Therefore it is estimated, based on methods in the ITE Trip Generation Handbook that an approximate 11% and 29% reduction in total trip generation for the site will occur during the AM and PM peak hours of analysis, respectively. This trip adjustment is calculated based upon ITE standards for multi-use trip reductions based on the varying uses and interconnections within the mixed use neighborhood. This multi-use trip projection adjustment was applied to the total site generated trips and subtracted from the traffic entering and exiting the site for the AM and PM peak period.

In addition, for certain types of developments, the total number of trips generated is different from the amount of new traffic added to the adjacent highway network by the generator. Retail-oriented developments (such as convenience stores, gas stations, shopping centers, discount stores, restaurants, service stations, and supermarkets) often locate adjacent to busy streets in order to attract the motorists already passing the site on the adjacent street. These sites attract a portion of their trips from traffic passing the site. The “pass-by” traffic refers to the amount of existing traffic already on the roadway adjacent to the site that, as it “passes by” the site, will enter the site driveways to patronize the project site.

The combination of “multi-use” and “pass-by” trips has the net result of reducing the volume of new traffic that is added to the site driveways and/or adjacent roadways. In the case of the proposed mixed use neighborhood, there will be both “multi-use” and “pass-by” trips associated with the new land uses on the site.

ITE data indicates that pass-by rates for shopping centers/retail uses can vary from 10% to as high as 80% during the PM peak hour, e.g. restaurants typically exhibit pass-by rates of 45% during the PM peak hour. Given the composition of the proposed land uses and location of the project site along Sheridan Drive and Maple Road, a conservative pass-by rate of 10% was used during the PM peak hour. **Table III** shows the total site generated trips, multi-use trips, pass-by trips, driveway trips, and resulting primary trips that are added to the existing highway system for full development of the project.

TABLE III: SITE TRAFFIC VOLUMES & ADJUSTMENTS

DESCRIPTION	SIZE	AM PEAK		PM PEAK	
		ENTER	EXIT	ENTER	EXIT
Single Family Residential	46 Units	11	31	33	19
Patio Homes	108 Units	21	64	71	42
Condominium Town Homes	90 Units	8	39	37	18
Rental Town Home	93 Units	21	44	34	33
Apartments	352 Units	35	141	137	74
Assisted Living	200 Units	18	10	19	25
Senior Housing	96 Units	6	13	14	11
Hotel	130 Rooms*	33	24	29	31
Medical-Dental Office	200,000 SF	378	100	200	514
Commercial/Retail	115,000 SF	105	65	316	342
Sub-total		636	531	890	1109
<i>Multi-use Trips**</i>		-67	-67	-290	-290
<i>Pass-by Trips</i>		0	0	-77	-68
Total New Trips		569	464	523	751

* Average occupancy rate is 65%. Therefore, 85 occupied rooms was used as the variable for trip generation purposes.

** TDM strategies, discussed in Section XI, will encourage reductions in off-site vehicular trips.

D. Site Traffic Distribution

The cumulative effect of site traffic on the transportation network is dependent on the origins and destinations of that traffic and the location of the access drives serving the site.

The proposed arrival/departure distribution of traffic to be generated at this site is considered a function of several parameters, including the following:

- Employment centers;
- Existing highway network;
- Proximity and access to I-290;
- Population centers;
- Location of land uses on proposed site plan; and
- Existing traffic patterns, traffic conditions, and controls

Figures 6A (residential), 6B (hotel), and 6C (commercial/office) show the anticipated trip distribution pattern percentages for full build-out of the proposed mixed use neighborhood. **Figures 7A, 7B, and 7C** show the resulting total site generated traffic as assigned to the study area intersections for the weekday AM and PM peak hour periods under full build-out conditions.

VII. FULL DEVELOPMENT VOLUMES

The projected design hour traffic volumes were developed for the weekday AM and PM peak hours by combining the future background traffic conditions (Figure 4), and projected site generated volumes for full build-out of the proposed mixed use project (Figures 7A-7C) in order to yield the total traffic conditions expected at full development. **Figure 8** illustrates the total weekday AM and PM peak hour volumes anticipated for the proposed development under full build-out conditions.

VIII. CAPACITY ANALYSIS

Capacity analysis is a technique used for determining a measure of effectiveness for a section of roadway and/or intersection based on the number of vehicles during a specific time period. The measure of effectiveness used for the capacity analysis is referred to as a Level of Service ("LOS"). Levels of Service are calculated to provide an indication of the amount of delay that a motorist experiences while traveling along a roadway or through an intersection. Since the most amount of delay to motorists usually occurs at intersections, capacity analysis focuses on intersections, as opposed to highway segments.

Six Levels of Service are defined for analysis purposes. They are assigned letter designations, from "A" to "F", with LOS "A" representing the best conditions and LOS "F" the worst. Suggested ranges of service capacity and an explanation of Levels of Service are included in the Appendix.

The standard procedure for capacity analysis of signalized and un-signalized intersections is outlined in the Highway Capacity Manual (HCM 2010) published by the Transportation Research Board. Traffic analysis software, Synchro 7, which is based on procedures and methodologies contained in the HCM 2000, was used to analyze operating conditions at study area intersections. The procedure yields a Level of Service based on the HCM 2010 as an indicator of how well intersections operate.

Existing and background operating conditions during the peak study periods are evaluated to determine a basis for comparison with the projected future conditions. The projected future traffic volumes generated by the proposed development were analyzed to assess the operations of the intersections in the study area. Capacity results for existing, background, and full development conditions are listed in **Table IV**. The discussion following the table summarizes capacity conditions. All capacity analysis calculations are included in the Appendices.

TABLE IV: CAPACITY ANALYSIS RESULTS

INTERSECTION	EXISTING		BACKGROUND		FULL DEVELOPMENT		FULL DEVELOPMENT W/ MITIGATION	
	AM	PM	AM	PM	AM	PM	AM	PM
Maple Road/Millersport Hwy SB (S)								
Eastbound Left – Maple Road	A(2.8)	A(5.1)	A(2.9)	A(5.4)	A(2.9)	A(5.9)	N/A	A(5.9)
Eastbound Thru – Maple Road	A(2.9)	A(5.5)	A(3.0)	A(5.8)	A(3.1)	A(6.3)		A(6.3)
Westbound Thru – Maple Road	A(4.8)	A(7.6)	A(5.2)	A(7.1)	A(5.9)	A(8.4)		A(2.3)
Westbound Right – Maple Road	A(0.2)	A(0.2)	A(0.3)	A(0.2)	A(0.3)	A(0.2)		A(0.1)
Southbound Left – Millersport Hwy SB	C(29.7)	C(26.0)	C(29.7)	C(25.5)	C(30.2)	C(25.0)		C(25.0)
Southbound Right – Millersport Hwy SB	B(11.4)	C(22.5)	B(11.4)	C(23.3)	B(11.3)	C(25.1)		C(25.1)
Overall LOS/Delay (sec/veh)	A(4.2)	A(7.7)	A(4.4)	A(7.8)	A(4.8)	A(8.6)		A(6.3)
Maple Road/Millersport Hwy NB (S)								
Eastbound Left – Maple Road	B(12.2)	C(31.8)	B(13.5)	D(37.6)	B(15.8)	E(62.2)	B(15.8)	B(19.3)
Eastbound Thru – Maple Road	A(8.8)	B(11.0)	A(9.5)	B(10.6)	B(10.7)	B(11.2)	B(10.7)	B(10.9)
Westbound Thru/Right – Maple Road	B(10.6)	B(14.3)	B(11.4)	B(14.5)	B(12.6)	B(15.5)	B(12.6)	C(28.7)
Northbound Left – Millersport Hwy NB	C(20.1)	B(16.0)	B(19.5)	B(16.2)	B(18.6)	B(16.2)	B(18.6)	B(16.9)
Northbound Thru/Right – Millersport Hwy NB	C(25.0)	D(37.4)	C(25.6)	D(41.1)	C(27.4)	D(44.9)	C(27.6)	D(47.8)
Overall LOS/Delay (sec/veh)	B(13.8)	B(18.3)	B(14.4)	B(19.2)	B(15.4)	C(21.0)	B(15.5)	C(25.3)
Maple Road/Maplemere Road (S)								
Eastbound Left – Maple Road	A(6.0)	A(6.5)	A(6.0)	A(6.6)	A(6.1)	A(6.9)	N/A	
Eastbound Thru/Right – Maple Road	A(6.4)	A(7.4)	A(6.4)	A(7.5)	A(6.5)	A(7.7)		
Westbound Left – Maple Road	A(5.3)	A(6.9)	A(5.4)	A(7.0)	A(5.4)	A(7.3)		
Westbound Thru/Right – Maple Road	A(6.5)	A(6.4)	A(6.6)	A(6.5)	A(6.7)	A(6.7)		
Northbound – Maplemere Road	B(15.5)	B(15.2)	B(15.7)	B(15.2)	B(16.6)	B(15.6)		
Southbound – Maplemere Road	B(13.7)	C(21.1)	B(14.1)	C(21.9)	B(14.9)	C(22.7)		
Overall LOS/Delay (sec/veh)	A(7.1)	A(7.9)	A(7.2)	A(8.0)	A(7.3)	A(8.2)		
Maple Road/Donna Lea Boulevard (U)								
Westbound Left – Maple Road	B(10.5)	C(15.3)	B(10.6)	C(15.8)	B(10.9)	C(15.8)	B(10.9)	C(16.9)
Northbound – Donna Lea Boulevard	C(14.9)	C(20.4)	C(15.0)	C(21.1)	C(15.3)	C(21.1)	B(14.5)	C(22.1)
Maple Road/Sandhurst Lane (U)								
Eastbound Left – Maple Road	B(10.6)	A(0.0)	B(10.7)	A(0.0)	B(11.4)	A(0.0)	N/A	
Westbound Left – Maple Road	B(10.4)	B(12.5)	B(10.5)	B(12.7)	B(11.1)	B(13.9)		
Northbound – Sandhurst Lane	C(20.4)	D(27.2)	C(21.0)	D(28.4)	C(23.9)	D(34.9)		
Southbound Audubon Golf Course	C(22.0)	A(0.0)	C(22.6)	A(0.0)	D(25.9)	A(0.0)		
Maple Road/North Forest Road (S)								
Eastbound Left – Maple Road	B(18.2)	C(22.2)	B(18.6)	C(23.2)	C(21.4)	C(33.4)	N/A	
Eastbound Thru – Maple Road	D(39.7)	D(44.9)	D(41.0)	D(46.7)	D(44.6)	D(54.4)		
Eastbound Right – Maple Road	A(5.3)	A(4.6)	A(5.2)	A(5.1)	A(5.3)	A(5.9)		
Westbound Left – Maple Road	D(39.7)	D(50.0)	D(43.8)	D(53.0)	D(49.5)	E(58.5)		
Westbound Thru – Maple Road	C(27.8)	C(31.7)	C(28.1)	C(32.1)	C(29.2)	C(34.1)		
Westbound Right – Maple Road	B(13.8)	B(16.4)	B(13.8)	B(16.5)	B(13.9)	B(16.8)		
Northbound Left – North Forest Road	D(39.8)	D(42.6)	D(43.5)	D(46.3)	D(50.8)	E(55.4)		
Northbound Thru – North Forest Road	D(42.1)	E(59.5)	D(42.7)	E(61.2)	D(43.7)	E(65.9)		
Northbound Right – North Forest Road	B(14.1)	B(19.5)	B(14.7)	C(20.1)	B(16.2)	C(21.6)		
Southbound Left – North Forest Road	C(27.8)	D(51.6)	C(28.6)	E(57.6)	C(29.8)	E(71.0)		
Southbound Thru - North Forest Road	D(51.3)	E(60.1)	D(53.2)	E(62.5)	E(56.3)	E(66.6)		
Southbound Right – North Forest Road	B(11.2)	A(9.1)	B(12.5)	B(10.3)	B(17.1)	B(14.3)		
Overall LOS/Delay (sec/veh)	C(33.0)	D(39.9)	C(34.3)	D(41.5)	D(36.7)	D(46.5)		

INTERSECTION	EXISTING		BACKGROUND		FULL DEVELOPMENT		FULL DEVELOPMENT W/ MITIGATION	
	AM	PM	AM	PM	AM	PM	AM	PM
Sheridan Drive/Mill Street (S)								
Eastbound Left – Sheridan Drive	C(27.2)	D(46.2)	C(27.4)	D(46.1)	C(28.8)	E(56.4)	C(29.7)	C(22.8)
Eastbound Thru/Right – Sheridan Drive	F(110.5)	F(*)	F(*)	F(*)	F(*)	F(*)	F(*)	D(37.2)
Westbound Left – Sheridan Drive	D(51.4)	D(43.8)	D(52.8)	D(45.9)	D(54.8)	D(45.9)	E(56.3)	E(60.6)
Westbound Thru/Right – Sheridan Drive	B(18.7)	D(50.5)	B(19.1)	D(53.6)	C(21.1)	E(67.5)	B(19.9)	B(19.6)
Northbound Left – Mill Street	C(34.0)	C(21.4)	C(34.1)	C(21.6)	C(34.6)	C(21.8)	D(40.1)	D(45.3)
Northbound Thru/Right – Mill Street	C(31.4)	C(22.5)	C(31.6)	C(22.7)	C(31.0)	C(22.7)	C(35.0)	D(42.9)
Southbound Left – Mill Street	D(43.2)	D(36.4)	D(43.4)	D(36.4)	D(43.2)	D(36.4)	D(47.4)	D(45.5)
Southbound Thru/Right – Mill Street	D(59.5)	C(34.2)	E(59.6)	C(34.3)	E(59.5)	C(34.1)	E(67.8)	D(42.6)
Overall LOS/Delay (sec/veh)	E(65.7)	F(98.4)	E(72.4)	F(104.0)	F(87.9)	F(134.7)	E(77.2)	C(31.9)
Sheridan Drive/North Forest Road (S)								
Eastbound Left – Sheridan Drive	C(20.1)	D(35.2)	C(21.0)	D(42.3)	C(26.9)	D(46.4)	C(22.3)	D(46.4)
Eastbound Thru – Sheridan Drive	D(44.6)	D(47.5)	D(47.8)	D(50.8)	E(59.9)	E(73.1)	D(47.2)	E(73.1)
Eastbound Right – Sheridan Drive	B(15.2)	B(16.1)	B(15.7)	B(16.7)	B(17.1)	B(19.1)	A(9.7)	B(13.8)
Westbound Left – Sheridan Drive	D(54.6)	F(*)	E(57.2)	F(*)	E(58.6)	F(*)	E(68.6)	F(*)
Westbound Thru/Right – Sheridan Drive	C(31.9)	D(38.6)	C(33.0)	D(40.4)	D(37.0)	D(48.3)	C(33.8)	D(48.3)
Northbound Left – North Forest Road	D(39.9)	E(57.2)	D(40.8)	E(60.3)	D(47.0)	E(78.9)	E(59.5)	E(78.9)
Northbound Thru – North Forest Road	D(42.5)	E(60.3)	D(42.7)	E(61.5)	D(42.2)	E(61.1)	D(45.9)	E(61.1)
Northbound Right – North Forest Road	B(12.1)	B(12.3)	B(11.7)	B(12.6)	B(11.7)	B(12.8)	B(12.5)	B(12.8)
Southbound Left – North Forest Road	C(27.5)	C(29.7)	C(27.5)	C(29.9)	C(27.4)	C(29.8)	C(29.0)	C(29.8)
Southbound Thru - North Forest Road	E(58.3)	E(60.6)	E(58.6)	E(61.0)	E(59.5)	E(61.3)	E(60.5)	E(61.3)
Southbound Right – North Forest Road	A(9.1)	A(9.0)	A(9.1)	A(8.9)	B(12.4)	A(8.9)	B(13.7)	A(8.9)
Overall LOS/Delay (sec/veh)	D(38.2)	D(51.6)	D(39.7)	D(54.5)	D(45.1)	E(63.5)	D(41.6)	E(63.1)
North Forest Road/Country Club Driveway (U)								
Eastbound Left – Country Club Driveway	C(21.4)	E(37.8)	C(22.3)	E(41.5)	REMOVED UNDER FULL DEVELOPMENT			
Northbound – North Forest Road	A(0.3)	A(1.0)	A(0.3)	A(1.0)				
Sheridan Drive/Fenwick Road/Proposed Driveway (U)							Signalized	
Eastbound Left – Sheridan Drive	N/A		N/A		E(36.6)	E(39.0)	D(49.7)	D(53.7)
Eastbound Thru/Right – Sheridan Drive	N/A		N/A		N/A		A(7.0)	B(11.6)
Westbound Left – Sheridan Drive	B(14.5)	C(15.8)	B(14.9)	C(16.3)	B(14.9)	C(15.9)	B(14.8)	B(16.6)
Westbound Thru – Sheridan Drive	N/A		N/A		N/A		C(27.2)	C(32.3)
Westbound Right – Sheridan Drive	N/A		N/A		N/A		A(3.0)	A(2.9)
Northbound – Fenwick Road	D(28.1)	D(25.0)	D(29.4)	D(26.0)	F(*)	F(*)	C(29.4)	B(20.0)
Southbound Left – Proposed Driveway	N/A		N/A		F(*)	F(*)	N/A	
Southbound Left/Thru – Proposed Driveway	N/A		N/A		N/A		D(49.8)	E(70.2)
Southbound Right – Proposed Driveway	N/A		N/A		E(56.4)	F(*)	C(25.2)	C(28.7)
Overall LOS/Delay (sec/veh)	N/A		N/A		N/A		B(19.6)	C(25.7)
Sheridan Drive/Frankhauser Road (S)								
Eastbound Left – Sheridan Drive	A(4.4)	A(6.9)	A(4.6)	A(7.6)	A(6.3)	B(19.4)	A(3.6)	B(10.1)
Eastbound Thru – Sheridan Drive	A(4.6)	A(5.1)	A(4.8)	A(5.3)	A(6.0)	A(6.5)	A(3.9)	A(4.8)
Westbound Thru/Right – Sheridan Drive	A(4.3)	A(5.1)	A(4.4)	A(5.2)	A(5.1)	A(7.0)	A(1.6)	A(4.0)
Southbound Left – Frankhauser Road	D(37.3)	D(37.7)	D(37.3)	D(37.7)	D(37.3)	D(37.7)	D(54.8)	E(55.5)
Southbound Right – Frankhauser Road	C(30.6)	C(33.5)	C(31.2)	C(34.1)	C(34.0)	C(35.8)	C(24.6)	D(39.2)
Overall LOS/Delay (sec/veh)	A(5.3)	A(6.0)	A(5.4)	A(6.2)	A(6.3)	A(7.7)	A(3.7)	A(5.6)

INTERSECTION	EXISTING		BACKGROUND		FULL DEVELOPMENT		FULL DEVELOPMENT W/ MITIGATION	
	AM	PM	AM	PM	AM	PM	AM	PM
Sheridan Drive/I-290 NB (S)								
Eastbound Left – Sheridan Drive	C(27.2)	E(55.4)	C(31.4)	D(54.8)	D(48.7)	E(55.6)	D(44.7)	E(55.5)
Eastbound Thru – Sheridan Drive	A(6.0)	A(9.3)	A(6.2)	A(9.7)	A(7.4)	B(10.7)	A(5.9)	A(8.2)
Westbound Thru/Right – Sheridan Drive	B(15.5)	C(28.8)	B(16.3)	C(31.0)	B(19.2)	D(51.1)	C(21.0)	B(16.8)
Northbound Left – I-290 NB	D(54.9)	D(48.9)	D(54.8)	D(48.6)	D(53.1)	D(49.1)	E(60.7)	E(77.5)
Northbound Thru – I-290 NB	D(44.4)	D(39.1)	D(45.1)	D(40.2)	D(50.6)	D(46.7)	D(48.4)	E(57.7)
Northbound Right – I-290 NB	D(42.0)	D(37.7)	D(43.2)	D(38.5)	D(48.3)	D(43.2)	D(46.0)	D(51.9)
Overall LOS/Delay (sec/veh)	B(17.3)	C(28.0)	B(18.0)	C(29.1)	C(21.0)	D(38.5)	C(21.1)	C(26.0)
Sheridan Drive/Harlem Road (S)								
Eastbound Thru – Sheridan Drive	B(16.9)	B(15.5)	B(17.5)	B(16.1)	C(20.5)	B(18.4)	C(20.5)	C(20.7)
Eastbound Right – Sheridan Drive	A(6.3)	A(7.5)	A(6.5)	A(7.8)	A(7.5)	A(9.0)	A(7.5)	B(10.8)
Westbound Left – Sheridan Drive	D(52.2)	D(52.3)	D(52.4)	D(52.2)	D(48.6)	D(53.5)	D(51.1)	C(32.4)
Westbound Thru – Sheridan Drive	A(3.9)	A(4.3)	A(4.0)	A(4.5)	A(4.2)	A(5.1)	A(1.1)	A(7.6)
Northbound Left – Harlem Road	D(54.2)	D(53.5)	D(54.1)	D(53.0)	D(54.1)	D(53.0)	D(54.1)	D(52.8)
Northbound Right – Harlem Road	C(31.1)	C(29.5)	C(32.1)	C(30.1)	C(35.5)	C(33.3)	C(35.5)	C(32.6)
Overall LOS/Delay (sec/veh)	C(23.8)	C(20.7)	C(24.2)	C(21.0)	C(25.5)	C(23.0)	C(25.2)	C(21.9)
Harlem Road/I-290 SB (S)								
Westbound Left – I-290 SB	C(34.2)	D(40.9)	D(35.1)	D(42.5)	D(42.8)	D(48.9)	D(42.7)	N/A
Westbound Right – I-290 SB	B(14.3)	B(10.8)	B(15.8)	B(11.4)	B(19.5)	B(13.9)	B(19.6)	
Northbound Thru/Right – Harlem Road	C(30.2)	C(32.2)	C(31.1)	C(33.4)	D(36.2)	D(37.0)	D(36.2)	
Southbound Left – Harlem Road	B(15.5)	C(30.1)	B(17.1)	C(33.2)	B(19.1)	D(39.9)	B(19.1)	
Southbound Thru – Harlem Road	A(8.5)	A(8.0)	A(8.8)	A(8.2)	A(8.3)	A(8.0)	A(8.4)	
Overall LOS/Delay (sec/veh)	B(19.7)	C(23.9)	C(20.8)	C(25.2)	C(24.2)	C(28.4)	C(24.2)	
Maple Road/Proposed Driveway (U)								
Eastbound Right – Maple Road	N/A	N/A	N/A	N/A	N/A		B(12.1)	B(13.1)
Westbound Left – Maple Road					B(12.3)	C(16.0)	A(5.0)	A(7.7)
Westbound Thru – Maple Road					N/A		A(4.9)	A(4.6)
Northbound Left – Proposed Driveway					C(21.0)	D(34.5)	C(20.9)	C(22.4)
Northbound Right – Proposed Driveway					N/A		A(8.9)	B(14.1)
Overall LOS/Delay (sec/veh)					N/A		A(8.7)	B(10.1)
Sheridan Drive/Proposed Limited Access Driveway (U)								
Eastbound Left – Sheridan Drive	N/A	N/A	N/A	N/A	C(15.4)	C(16.1)	C(15.5)	C(16.2)
Southbound Right – Proposed Driveway					A(10.0)	B(10.6)	A(9.9)	B(10.6)

NOTES:

1. A(2.8) = Level of Service (Delay in seconds per vehicle)
2. (S) = Signalized; (U) = Unsignalized
3. N/A = Approach does not exist and/or was not analyzed during this condition
4. F(*) = Delay exceeds two minutes

Maple Road / Millersport Hwy SB

All approaches operate at level of service “C” or better during the AM and PM peak hours between existing, background, and full development conditions. No changes in level of service are expected as a result of the proposed development. The overall LOS remains at “A” during both peak hours under all conditions. No mitigation is warranted or recommended at this intersection. Levels of service shown in the “Full Development with Mitigation” column of the table are a result of signal timing changes at the adjacent ramp intersection and coordination of the two signals.

Maple Road / Millersport Hwy NB

All approaches operate at LOS “D” or better during the AM and PM peak hours between existing and background conditions. The eastbound left turn movement is expected to decrease in level of service from “D” to “E” during the PM peak hour between background and full development conditions. The overall level of service during the PM peak hour is expected to decrease from “B” to “C” between background and full development conditions. It is recommended that an eastbound left-turn phase be added to the signal phasing which results in an improvement in PM peak hour level of service from “E” to “B”.

Maple Road / Maplemere Road

All approaches are expected to operate at LOS “C” or better between existing, background, and full development conditions. The overall level of service is projected to be “A” during all conditions under both peak hours. Therefore, no mitigation is warranted or recommended.

Maple Road / Donna Lea Boulevard

All approaches are expected to operate at level of service “C” or better between existing, background, and full development conditions. No mitigation is warranted or recommended at this intersection.

Maple Road / Sandhurst Lane

The northbound approach decreases from level of service “D” to “E” during the PM peak hour between background and full development conditions. The southbound approach decreases from LOS “C” to “D” during the AM peak hour. The actual increases in delay associated with these changes in levels of service are small (less than 6.6 seconds per vehicle) and are characteristic of unsignalized side roads intersecting high volume arterials such as Maple Road. No mitigation is warranted or recommended.

Maple Road / North Forest Road

All approaches are expected to operate at LOS “E” or better during both peak hours. During the AM peak hour between background and full development conditions, the overall LOS is expected to decrease from “C” to “D”. All approaches are anticipated to operate at level of service “E” or better between background and full development conditions. No mitigation is warranted or recommended.

Sheridan Drive / Mill Street

The eastbound through/right approach operates at level of service “F” during the AM and PM peak hours under existing, background, and full development conditions. Between background and full development conditions, the overall level of service during the AM peak hour is expected to decrease from “E” to “F”. During the PM peak hour, the LOS is expected to remain “F”. Signal timing adjustments to increase the green time given to the eastbound and westbound phases while decreasing the green time for the northbound and southbound phases improves the overall level of service during the AM peak hour from “F” to “E”. Likewise, during the PM peak hour, the overall LOS will increase from “F” to “C”. It should be noted that during the existing conditions, the intersection experiences eastbound queues extending to Park Country Club during both peak hours. Changes in signal timing will improve the queuing conditions.

Sheridan Drive / North Forest Road

The eastbound through movement LOS is projected to change from “D” to “E” during the AM and PM peak hours between background and full development conditions. The westbound left turn movement operates at LOS “F” during the PM peak hour under all conditions. Observations of existing conditions noted southbound queues extending beyond the existing Westwood Country Club driveway. Additionally, during the PM peak hour, westbound queues

extend beyond Fleetwood Terrace. An eastbound right-turn overlap phase is recommended for this intersection. Doing so improves the eastbound thru level of service from “E” to “D” during the AM peak hour while reducing overall intersection delay by 3.5 seconds. It is important to note that the proposed north/south roadway through the neighborhood may relieve traffic volumes along North Forest Road and at the intersections with Maple Road and Sheridan Drive by providing motorists with an alternate connection between Maple Road and Sheridan Drive.

North Forest Road / Country Club Driveway

The eastbound exiting approach from Westwood Country Club currently operates at LOS “C” and “E” during the AM peak hours between existing and background conditions. This driveway is expected to be removed upon full development of the site.

Sheridan Drive / Fenwick Road / Proposed Driveway

Between existing and background conditions, all approaches operate at level of service “D” or better. Under full development conditions, the southbound approach exiting the proposed site is expected to operate at LOS “F” with delays greater than two minutes; with the exception of the southbound right during the AM peak hour operating at LOS “E”. The eastbound left turn movement into the new site will operate at LOS “F” during both peak hours.

Recommended Mitigation

Based on the expected delays under full development conditions and a traffic signal warrant analysis, a three-colored traffic signal is recommended for this intersection. The traffic signal should be designed to provide a permitted/protected eastbound left-turn phase as well as a southbound right-turn overlap phase. Southbound left and through traffic should be phased as permitted/protected. In addition, a westbound right-turn only lane should be constructed on Sheridan Drive to provide storage space for vehicles entering the site. The lane should provide 425’ of storage space with a 75’ taper. The existing two-way left-turn lane should be restriped to provide a westbound left-turn only lane entering the site. 350’ of storage space should be provided. In addition, this signal should be coordinated with other traffic signals to the west on Sheridan Drive.

Sheridan Drive / Frankhauser Road

All approaches operate at level of service “D” or better during both peak hours under existing, background, and full development conditions. No change in the overall level of service is expected during both peak hours under all conditions. This signal should be coordinated with other traffic signals to the west on Sheridan Drive.

Sheridan Drive / I-290 NB

All approaches are expected to operate at LOS “D” or better under full development conditions during both peak hours. The exception is the eastbound left approach which operates at LOS “E” during the PM peak hour. Signal timing adjustments can reduce delay for the westbound through/right approach, as well as increase the overall level of service from “D” to “C” during the PM peak hour. This signal should be coordinated with other traffic signals to the east on Sheridan Drive.

Sheridan Drive / Harlem Road

The overall level of service remains “C” during both peak hours between all conditions. All approaches operate at LOS “D” or better during both peak hours under full development conditions. Minor signal timing adjustments can reduce delay for the westbound left approach during both peak hours, as well as reduce overall intersection delay. This signal should be coordinated with other traffic signals to the east on Sheridan Drive.

Harlem Road / I-290 SB

All approaches operate at level of service “D” or better during both peak hours between existing, background, and full development conditions. The southbound left approach is projected to decrease in level of service from “C” to “D” during the PM peak hour between background and full development conditions. Levels of service shown in the “Full Development with Mitigation” column of the table are a result of signal timing changes at the study intersection.

Maple Road / Proposed Driveway

The northbound driveway approach to Maple Road is expected to operate at level of service “C” during the AM peak hour and “D” during the PM peak hour under full development conditions. Meanwhile, the westbound left turn movement operates at LOS “B” and “C” during the AM and PM peak hours respectively.

Recommended Mitigation

Based on the expected delays under full development conditions and a traffic signal warrant analysis, a three-colored traffic signal is recommended for this intersection. The traffic signal should be designed to provide a permitted/protected westbound left-turn phase as well as a northbound right-turn overlap phase. The existing two-way left-turn lane should be restriped to provide a westbound left-turn only lane entering the site.

Sheridan Drive / Proposed Limited Access Driveway

The proposed driveway is expected to operate at LOS “A” and “B” during the AM and PM peak hours respectively under full development conditions. The levels of service and expected delays are acceptable. However, it is recommended that a right-turn only lane be installed to provide a deceleration lane and storage area for right turning vehicles entering the Project site. The lane should provide 425’ of storage space with a 75’ taper. The existing two-way left-turn lane should be restriped to provide a westbound left-turn only lane entering the site.

It is noted that any signal timing adjustments should be made with careful consideration of adjacent signalized intersections given the proposed signal coordination.

IX. AUXILIARY TURN LANE WARRANT INVESTIGATION

Volume warrants for left-turn treatments on Maple Road and Sheridan Drive at the proposed access roads were evaluated using the Transportation Research Board's NCHRP Report 279, Intersection Channelization Design Guide, 1985. According to this Design Guide, provisions for left-turn lane facilities should be established where traffic volumes are high enough and safety considerations are sufficient to warrant the additional lane. This investigation analyzes warrants during the AM and PM peak hours. However, two-way left-turn facilities already exist at the location of the proposed access roads. Therefore, this study includes the existing lane geometry in the analysis.

Right-turn lane volume guidelines were also examined at the proposed intersections along Maple Road and Sheridan Drive. While the future volumes satisfy the right-turn lane guidelines at the intersection of Maple Road and the proposed driveway under full development during the AM and PM peak hours, no improvement is recommended given the location of adjacent residential properties. Right-turn guidelines are satisfied during both peak hours at the intersections of the Sheridan Drive/Fenwick Road/Proposed Driveway and Sheridan Drive/Proposed Right-in Right-out only Driveway.

All supporting calculations are included in the Appendix of this report.

X. TRAFFIC SIGNAL WARRANT INVESTIGATION

A traffic signal warrant analysis was conducted at the proposed driveway on Maple Road and the intersection of Sheridan Drive/Fenwick Road/Proposed Driveway. The need for a traffic signal is determined by comprehensive investigation of existing and projected traffic conditions and physical characteristics at the location. The *Standard Specifications Update for the adoption of the National MUTCD (FHWA) and the New York State Supplement* were reviewed to investigate the need for a traffic control signal at this location. There are nine (9) warrants and they are as follows:

Warrant 1	Eight-Hour vehicular volume
Warrant 2	Four-Hour vehicular volume
Warrant 3	Peak Hour
Warrant 4	Pedestrian Volume
Warrant 5	School Crossing
Warrant 6	Coordinated Signal System
Warrant 7	Crash Experience
Warrant 8	Roadway Network
Warrant 9	Intersection Near a Grade Crossing

Detailed signal warrant calculations are included in Appendix A2 of the Report. Prior to applying warrants, the MUTCD suggests consideration of the effects of right turn volumes on the minor street approach, and a reduction taken in the number of right turning vehicles, where appropriate. A certain number of right turn vehicles will execute a right turn on the red indication without actuating a traffic signal (if one were in place). For purposes of this analysis, it is projected that 25% of the right turning vehicles exiting the proposed full access driveways along Maple Road and Sheridan Drive would execute a right turn on red maneuver and should therefore be subtracted for the purposes of the warrant analysis. The posted speed limit on Maple Road and Sheridan Drive is 45 miles per hour and therefore, 70 percent thresholds in Table 4C-1, Figure 4C-2 and Figure 4C-4 are used as a basis for analysis.

Warrant 1 is subdivided into Condition A and Condition B. The Minimum Vehicular Volume, Condition A, is intended for application at locations where a large volume of intersecting traffic is the principal reason to consider installing a traffic control signal. The Interruption of Continuous Traffic, Condition B, is intended for application at locations where Condition A is not satisfied and where the traffic volume on a major street is so heavy that traffic on a minor intersecting street suffers excessive delay or conflict in entering or crossing the major street. These conditions are satisfied when, for each of any eight hours of an average day, anticipated volumes on the artery and side road are in excess of the minimum values presented in Tables 4C-1 in the MUTCD. Hourly traffic volumes along Maple Road and Sheridan Drive at the proposed full access driveways were projected based on the hourly traffic distribution measured by NYSDOT along Maple Road in 2010 and Sheridan Drive in 2011. Hourly traffic volumes expected to exit the proposed driveways were projected based on the hourly distribution for a typical office facility (using local office park data) given the majority of estimated trips generated by the site are office-related. Based upon these calculations, Conditions A is met for four of the eight hours at the proposed driveway along Maple Road. Condition A is met for seven of the eight hours at the proposed full access driveway along Sheridan Drive. Condition B for Warrant 1 is satisfied for all eight hours at both proposed driveways under full development conditions.

Warrant 2, the Four-Hour Vehicular Volume signal warrant conditions, are intended to be applied where the volume of intersecting traffic is the principal reason to consider installing a traffic control signal. This warrant stipulates that for any four hours of a day, minimum threshold volumes are met on the artery and side road. Based on the projected hourly traffic volumes on the proposed full access driveways, this warrant is met under full development conditions for both proposed full access driveways.

Warrant 3 is intended for application where minor street traffic suffers undue delay in entering or crossing the major street for one hour of the day. It stipulates that the warrant shall be applied in unusual cases (high-occupancy vehicle facilities) where a large number of vehicles discharge over a short period of time. Based on the current uses (office, retail, residential, hotel) at the proposed full access driveways along Maple Road and Sheridan Drive, this warrant is met in Figure 4C-4 under full development conditions.

Warrant 4 is met when pedestrians experience excessive delay in crossing the major street (Maple Road and Sheridan Drive) because the traffic volumes are so heavy. The intersections have infrequent pedestrian activity. This warrant is not met.

Warrant 5 is met when a sufficient number of gaps in traffic do not exist for certain size and frequency of school children to cross the major roadway. Based on the current conditions and low pedestrian activity, this warrant is not applicable at this location.

Warrant 6 is met when a traffic signal is needed to maintain progressive movement and vehicle platooning in a coordinated signal system. Based on the current signal system along Maple Road and Sheridan Drive, this warrant is not met.

Warrant 7 is met when the severity, frequency, and types of crashes are such that it is a condition susceptible to correction by a traffic signal. Accident data at the proposed Maple Road location and exiting Sheridan Drive/Fenwick Road resulted in two accidents during the three-year study period. Therefore, this warrant is not currently met.

Warrant 8 is met when a traffic signal might encourage concentration and organization of traffic flow on a roadway network. This warrant primarily focuses on two major intersecting roadways, which is not the case at the proposed full access driveways. Therefore, this warrant is not met.

Warrant 9 is applicable when an intersection is located near an at-grade rail crossing. This warrant is not applicable to the proposed driveway locations and therefore is not met.

Based on the traffic signal warrant investigation, the traffic signal warrants dealing solely with traffic volumes (Warrants 1-3) are met under full development conditions at the proposed full access driveways. **Table V** describes each warrant and the result of our firm's signal warrant investigation. Based upon the capacity analysis results and traffic signal warrant analysis, installation of a traffic signal is recommended at the proposed driveway along Maple Road and proposed full access driveway on Sheridan Drive.

TABLE V: TRAFFIC SIGNAL WARRANT SUMMARY

WARRANT #	DESCRIPTION	FULL BUILD CONDITONS	
		Maple Road/Proposed North Driveway	Sheridan Drive/Proposed South (Full Access) Driveway
1	<i>Eight-Hour vehicular volume</i>	MET	MET
2	<i>Four-Hour vehicular volume</i>	MET	MET
3	<i>Peak Hour</i>	MET	MET
4	<i>Pedestrian Volume</i>	NOT MET	NOT MET
5	<i>School Crossing</i>	NOT MET	NOT MET
6	<i>Coordinated Signal System</i>	NOT MET	NOT MET
7	<i>Crash Experience</i>	NOT MET	NOT MET
8	<i>Roadway Network</i>	NOT MET	NOT MET
9	<i>Intersection Near a Grade Crossing</i>	NOT MET	NOT MET

Discussions with the Project Sponsor indicated that the initial construction phases will include installing the north/south connector public roadway between Maple Road and Sheridan Drive. Additionally, the office and hotel component will be developed at first, followed by the retail component oriented towards the south of the site plan and residential development to the north of the site plan. Based on the expected delays under full development conditions and a traffic signal warrant analysis, a three-colored traffic signal is recommended for both intersections. Therefore, it is recommended that the proposed full access driveway on Sheridan Drive be installed with a three-colored traffic signal. A protected/permitted eastbound left-turn phase is recommended given the volume of left-turns entering the site. The signal should be coordinated with the existing traffic signal network to the west along Sheridan Drive. Meanwhile, the proposed driveway on Maple Road should be installed with a three-color traffic signal. A protected/permitted westbound left-turn phase is recommended given the volume of left-turns entering the site.

The proposed full access public roadway on Sheridan Drive should be designed to provide two lanes of exiting traffic and two lanes of entering traffic to both facilitate traffic movements and to achieve the desired alignment with the existing Fenwick Road on the south side of Sheridan Drive. The throat length of the driveway should be designed to accommodate vehicle queues exiting the site and reduce vehicle blockages of internal circulation roadways. Therefore, a minimum uninterrupted throat length of 200 ft is recommended.

XI. TRANSPORTATION DEMAND MANAGEMENT RECOMMENDATIONS

Transportation Demand Management (“TDM”), if implemented strategically, can have a noticeable impact on reducing trips from a project. TDM is the application of strategies and policies to reduce Single Occupant Vehicle (“SOV”) travel demand, or to redistribute this demand in space or in time. By definition, TDM includes various strategies that produce a more efficient use of transportation resources and increase the efficiency of a transportation system.

TDM programs have many potential benefits. They can reduce the total number of vehicle miles

traveled by promoting alternatives to driving alone. Fewer vehicle miles traveled results in less ozone pollution. TDM programs can be used by employers to reduce overhead costs, enhance productivity and reduce employee turnover. TDM programs can improve the use of public transit services, bikeways, sidewalks and carpool lanes by educating users about their travel options and coordinating trips between users with similar trip patterns. Implementing an effective TDM program can also reduce the required number of parking spaces for a project and/or eliminate the need to consider building costly multi-story parking structures. The following table summarizes some of the benefits that can be realized from an effective TDM program.

TABLE VI: BENEFITS OF TDM PROGRAMS

BENEFIT	DESCRIPTION
Congestion Reduction	Reduces traffic congestion delays and associated costs.
Road & Parking Savings	Reduces road and parking facility costs.
Consumer Savings	Helps consumers save money by reducing their need to own and operate motor vehicles.
Transport Choice	Improved travel options, particularly for non-drivers.
Road Safety	Reduced crash risk
Environmental Protection	Reduced air, noise and water pollution, wildlife crashes and other types of environmental damages.
Efficient Land Use	Supports strategic land use planning objectives, such as reduced sprawl, urban redevelopment and reduced habitat fragmentation.
Community Livability	Improved local environmental quality and community cohesion.
Economic development	Supports a community's economic objectives, such as increased productivity, employment, wealth, property values and tax revenues.
Physical Fitness and Health	Improved public fitness and health due to more physical activity, usually through increased daily walking and cycling.

The following TDM strategies are recommended for consideration in connection with the proposed mixed use neighborhood:

1. **Transit Coordination** – Coordinating transit routes and marketing the Sheridan Route 49 bus line will boost ridership through increased awareness coupled with improved service.
2. **Route Expansion** – New expanded bus service through the Westwood project site provides an opportunity for greater mode choice resulting in trip and parking reductions.
3. **Bus Stop Amenities** – A clean, well-lit, informative bus stop with shelters and seating greatly improves the image of the transit serving an area. Station amenities make taking the bus a comfortable experience, while proper maintenance tells people that transit makes up an important part of the neighborhood. New bus stops should have the following elements:
 - A level concrete pad, unobstructed by street furniture, landscaping, or signage
 - Reliable pedestrian access with clear sidewalks providing direct access to the bus loading area

- Clear sight lines allowing travelers to see around the stop and drivers to see around corners to make turns
 - Adequate lighting
 - Pedestrian amenities such as a bench and trash receptacle
 - Route, schedule and information
 - Bicycle rack
4. **Employer Carpooling** – carpooling can be encouraged by providing incentives and other services such as ridematching.
 5. **Emergency Ride Home** – In case of a personal emergency during the day, transportation is provided at no cost to one’s vehicle, residence, or other place such as childcare, doctor’s office, etc.
 6. **Preferential carpool/vanpool parking**
 7. **Transportation Alternatives Information** – bus schedules and bike maps.
 8. **Telecommuting and compressed work schedules** – employee vehicle trips are reduced by the percentage of employees that telecommute, or have a “free” day gained through a compressed schedule, on an average day

These programs must be coupled with improvements in transit service, pedestrian and bicycle accommodations.

XI. CONCLUSIONS & RECOMMENDATIONS

This Traffic Impact Study identifies and evaluates the potential traffic impacts resulting from full build-out of the proposed Westwood Country Club Development. Based upon this analysis, the results indicate that the proposed development can be accommodated by the existing roadway network with the following recommendations in place. The following sets forth conclusions and recommendations based upon the results of the analyses:

1. The proposed development is expected to generate approximately 1,033 (1,274) new trips during the AM (PM) peak hours respectively.
2. A left-turn lane warrant investigation was conducted along Maple Road and Sheridan Drive at the proposed driveways. However, two-way left-turn facilities already exist at the location of the proposed access roads. The two-way left-turn lanes should be restriped to accommodate dedicated left-turn lanes entering the proposed driveway along Maple Road, the existing Sheridan Drive/Fenwick Road intersection, and proposed limited access driveway along Sheridan Drive.
3. A right-turn lane investigation was conducted along Maple Road and Sheridan Drive at the proposed driveway locations, including the proposed limited access driveway on Sheridan Drive. While the future volumes satisfy the right-turn lane guidelines at the intersection of Maple Road and the proposed driveway under full development during the AM and PM peak hours, no improvement is recommended given the location of adjacent residential properties. Right-turn guidelines were satisfied during both peak hours at the intersections of the Sheridan Drive/Fenwick Road/Proposed Driveway and

Sheridan Drive/Proposed Right-in Right-out only Driveway. The right turn lanes should provide 425' of storage space with a 75' taper.

4. Install a new traffic signal at the proposed full access public roadway on Sheridan Drive when the driveway is constructed. The signal should be coordinated with the existing traffic signal network along Sheridan Drive to the west of the project site.
5. Install a new traffic signal at the proposed full access public roadway connection on Maple Road when the driveway is constructed.
6. The proposed full access public roadway on Sheridan Drive should be designed to provide two lanes of exiting traffic and two lanes of entering traffic to both facilitate traffic movements and to achieve the desired alignment with the existing Fenwick Road. The throat length of the driveway should be designed to accommodate vehicle queues exiting the site and reduce vehicle blockages of internal circulation roadways; therefore a minimum uninterrupted throat length of 200 ft is recommended.
7. Internal sidewalks should form an inter-connected network allowing users to actively walk amongst the various land use components to be included in the mixed use neighborhood. Additionally, internal paved recreational paths should be designed and installed to encourage bicycle use.
8. The southern portion of the proposed mixed use neighborhood consisting of the commercial, higher density residential, and the hotel components should incorporate bicycle parking and related facilities into the design. Such facilities should include bike racks and consideration can be given to providing bike lockers, shower and changing facilities within one or more of the proposed buildings.
9. Transportation demand management (TDM) strategies should be considered and implemented when practical to reduce off-site vehicular trips.
10. Consideration should be given to reducing the number of parking spaces constructed on-site given the mixed-use nature of the neighborhood, potential for non-vehicular trips, and the potential for shared parking between non-competing uses.

XII. FIGURES

Figures 1 through 8 are included on the following pages.

FIGURE 1 - SITE LOCATION AND STUDY AREA



Key

- Study Intersections
- Proposed Intersection
- ▭ Study Area
- ▭ Site Location

PROPOSED WESTWOOD MIXED USE NEIGHBORHOOD
TOWN OF AMHERST, NY

Feet
 0 1,000 2,000 4,000

North Arrow



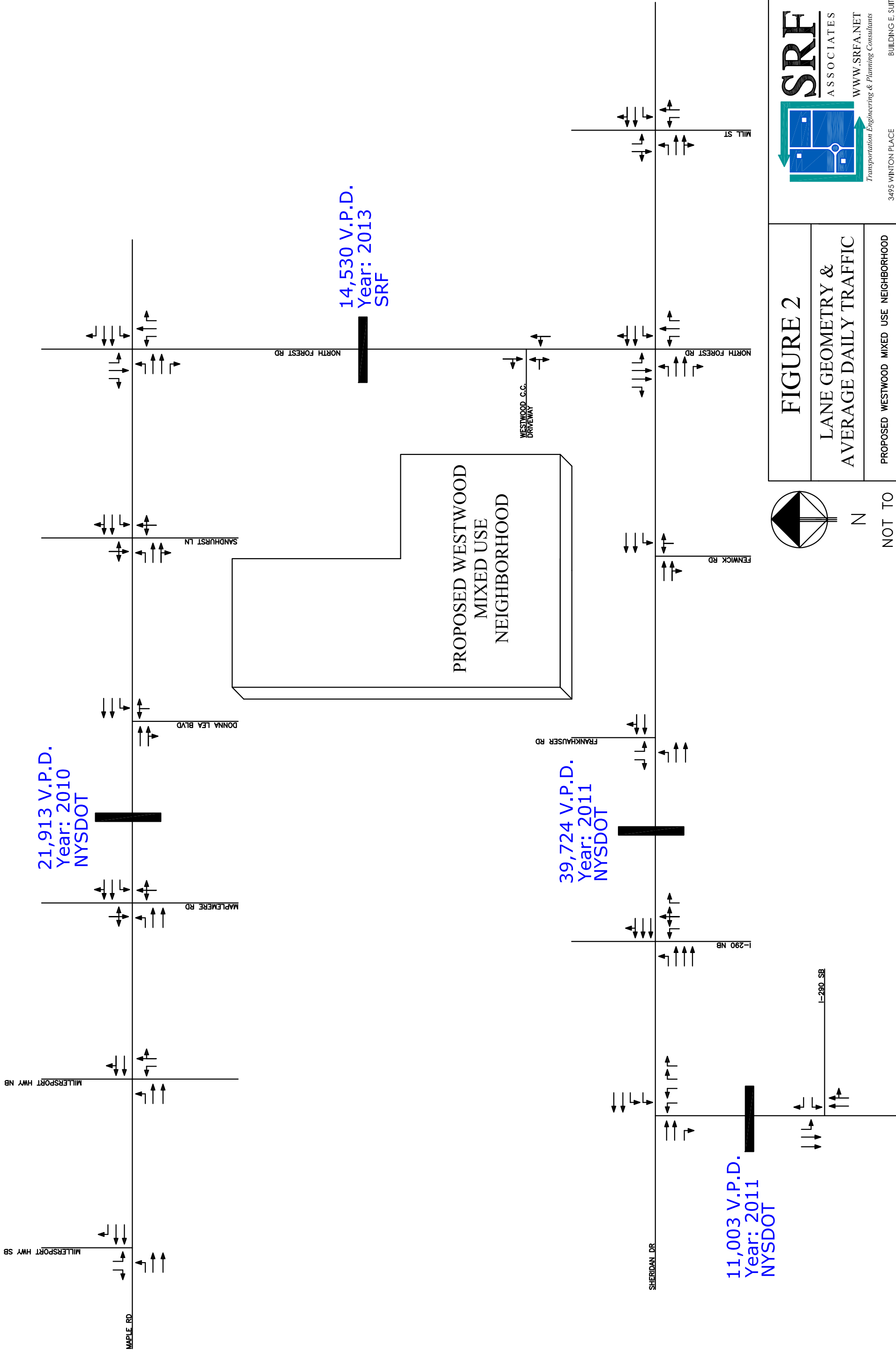


FIGURE 2
LANE GEOMETRY & AVERAGE DAILY TRAFFIC
 PROPOSED WESTWOOD MIXED USE NEIGHBORHOOD
 TOWN OF AMHERST, NEW YORK



3495 WINTON PLACE
 585.272.4660
 BUILDING E, SUITE 110
 585.272.4662 fax

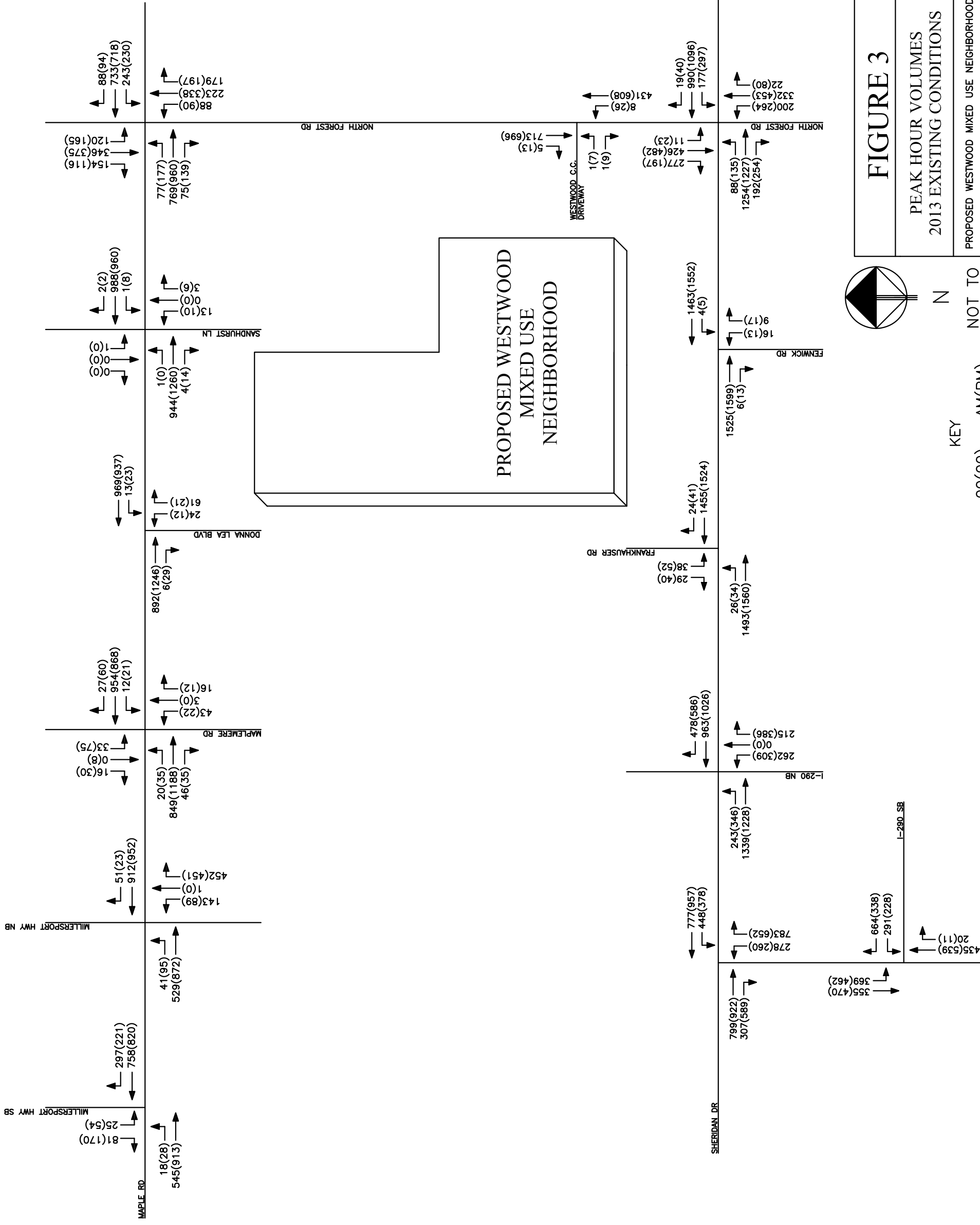


FIGURE 3
 PEAK HOUR VOLUMES
 2013 EXISTING CONDITIONS
 PROPOSED WESTWOOD MIXED USE NEIGHBORHOOD
 TOWN OF AMHERST, NEW YORK

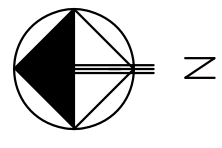
FIGURE 3
 PEAK HOUR VOLUMES
 2013 EXISTING CONDITIONS
 PROPOSED WESTWOOD MIXED USE NEIGHBORHOOD
 TOWN OF AMHERST, NEW YORK



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FIGURE 4
PEAK HOUR VOLUMES 2023
BACKGROUND CONDITIONS
 PROPOSED WESTWOOD MIXED USE NEIGHBORHOOD
 TOWN OF AMHERST, NEW YORK



NOT TO SCALE

KEY

00(00) = AM(PM)

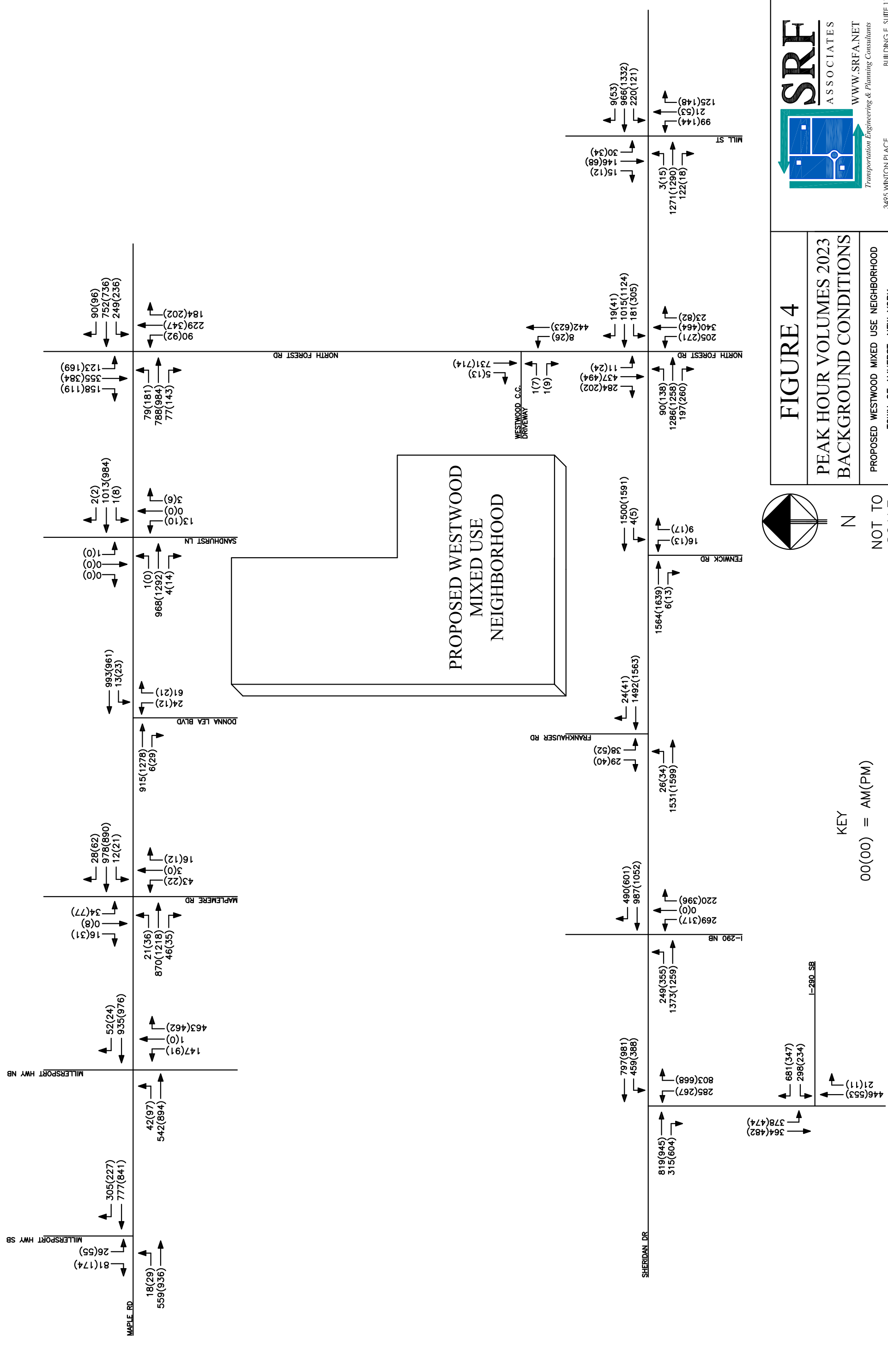
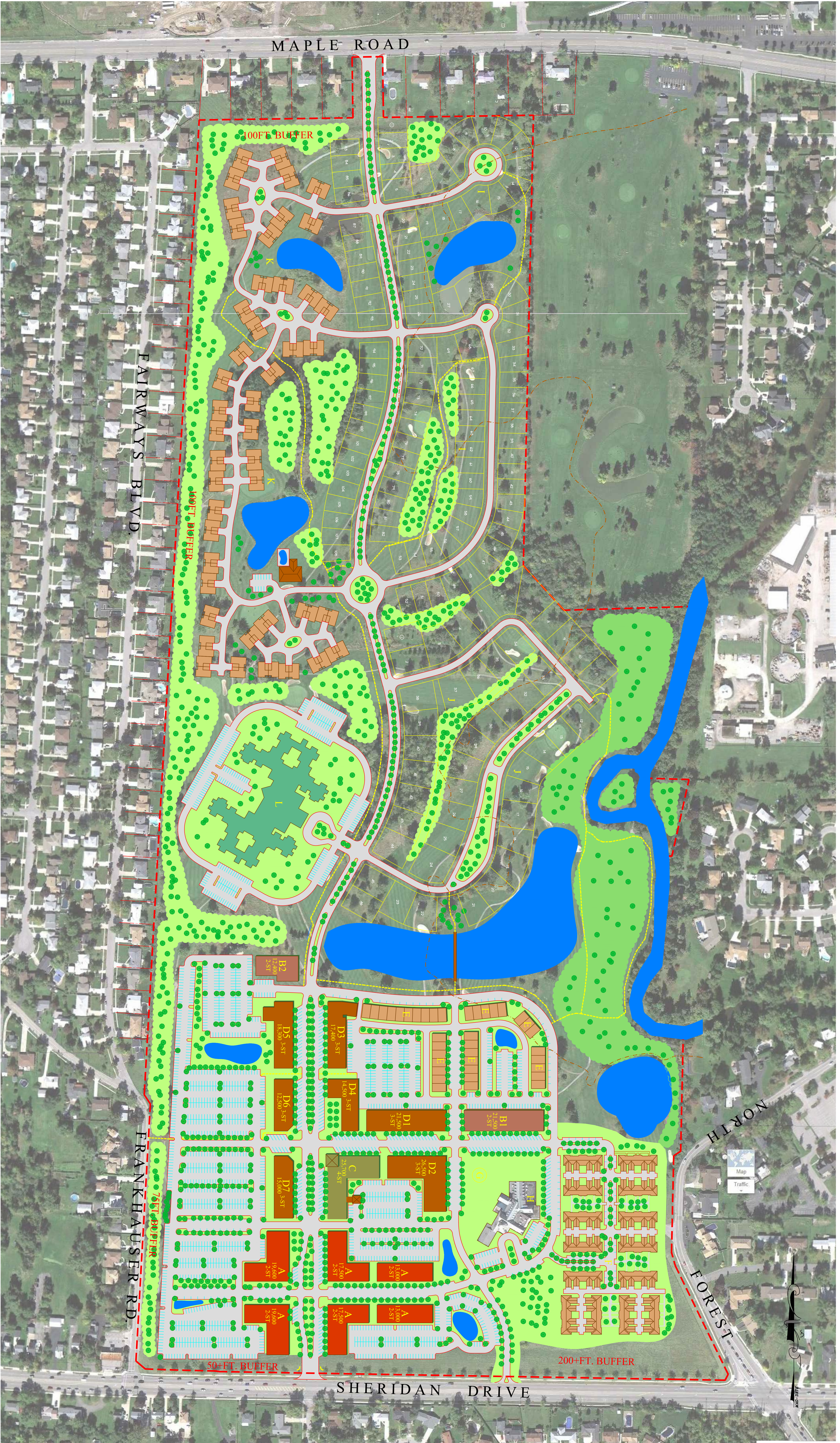


FIGURE 5 - CONCEPT SITE PLAN



LEGEND:

WESTWOOD COMMONS:

- A. OFFICE: 200,000 SQ.FT.
- B. RESIDENTIAL: 72 UNITS
- C. HOTEL: 130 KEYS
- D. MULTI-FAMILY OVER NEIGHBORHOOD BUS/OFF: 280 UNITS
- E. LAKE EDGE TOWNHOMES / MULTI-FAMILY: 37 UNITS
- F. RIVERS EDGE MULTI-FAMILY APARTMENTS: 56 UNITS
- G. EVENT SPACE
- H. EXISTING CLUBHOUSE 12 ACRES

- I. PATIO HOME LOTS: 108 UNITS
- J. LARGER LOTS - SINGLE FAMILY 46 UNITS
- K. TOWNHOMES: 90 UNITS
- L. SENIOR LIVING FACILITY 200 / INDEPENDENT 96

NOTES:

1. TOTAL PARKING COUNT IN THE WESTWOOD COMMONS AREA: 2,180 STALLS.
 2. WESTWOOD PARKWAY WIDTH: 80 FT.
 3. STANDARD ROADWAY WIDTH: 50 FT.
- DENOTES PEDESTRIAN TRAILS (2MI.)

WESTWOOD

CONCEPTUAL MASTER PLAN

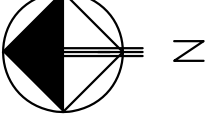
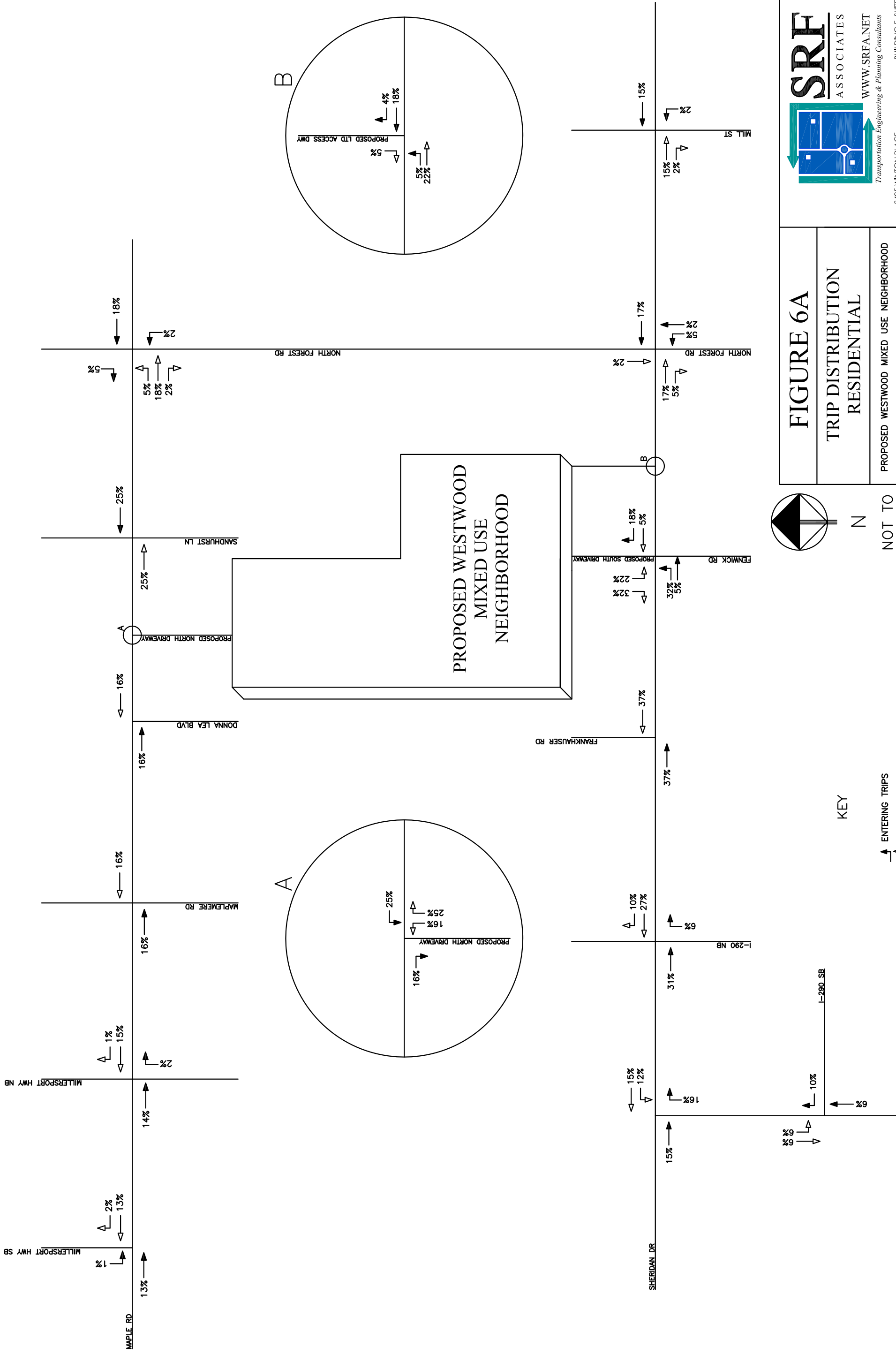
03/11/2014

MENSCH
Capital Partners, LLC

GOODY CLANCY
ARCHITECTURE
PLANNING
PRESERVATION

FONTANESE
FOLTS
AUBRECHT
ERNST
ARCHITECTS
A PROFESSIONAL CORPORATION

Mussbamer & Clarke, Inc.
ENGINEERS AND SURVEYORS



NOT TO SCALE

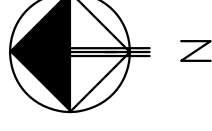
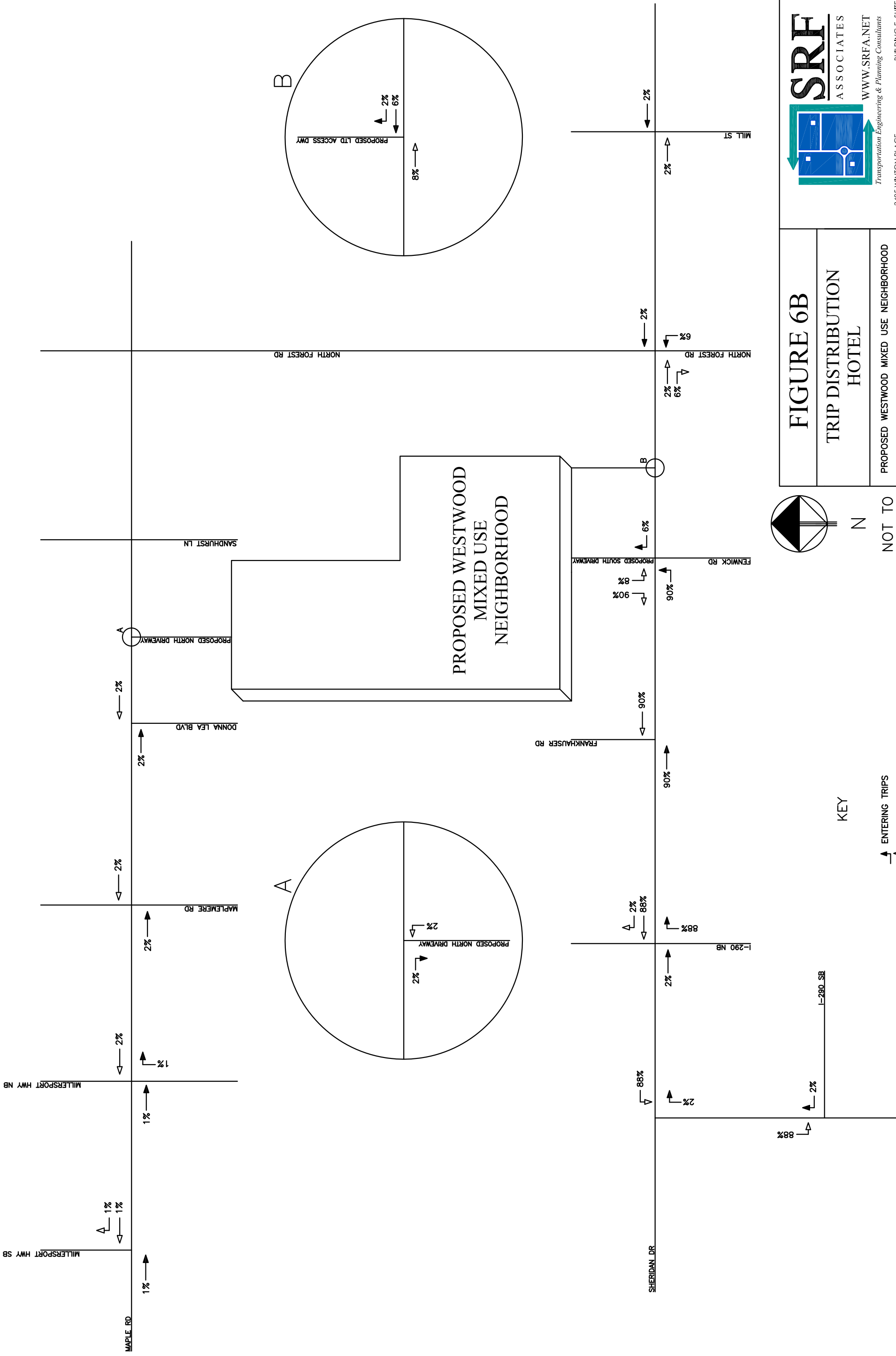
FIGURE 6A
TRIP DISTRIBUTION
RESIDENTIAL

PROPOSED WESTWOOD MIXED USE NEIGHBORHOOD
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KEY

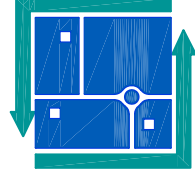
-  ENTERING TRIPS
-  EXITING TRIPS

NOT TO SCALE

FIGURE 6B

TRIP DISTRIBUTION HOTEL

PROPOSED WESTWOOD MIXED USE NEIGHBORHOOD
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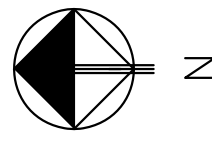
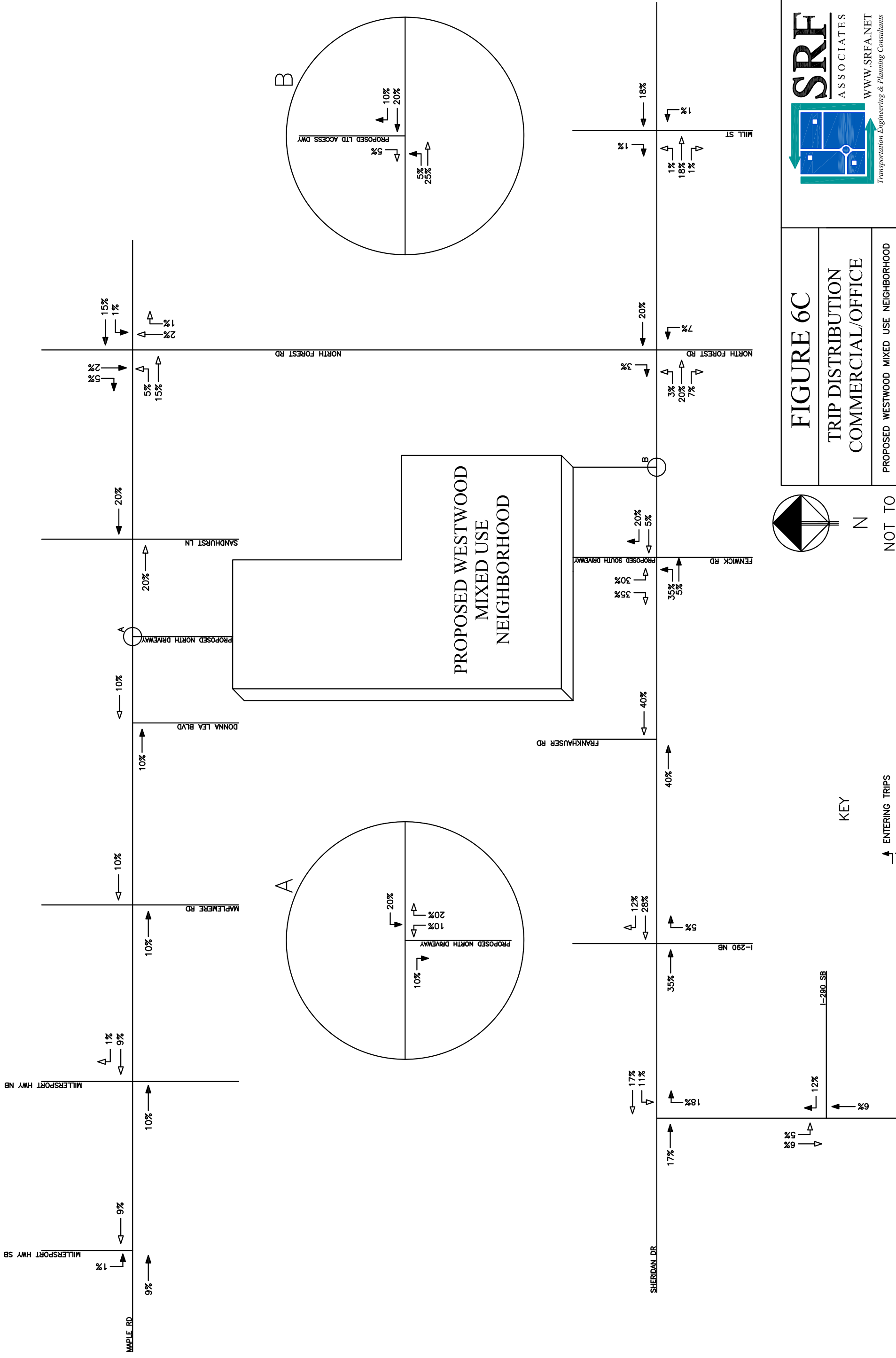
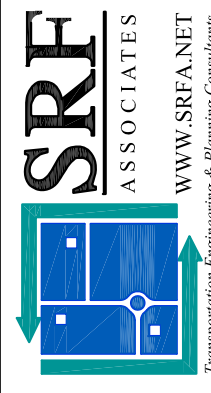


FIGURE 6C

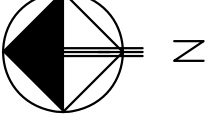
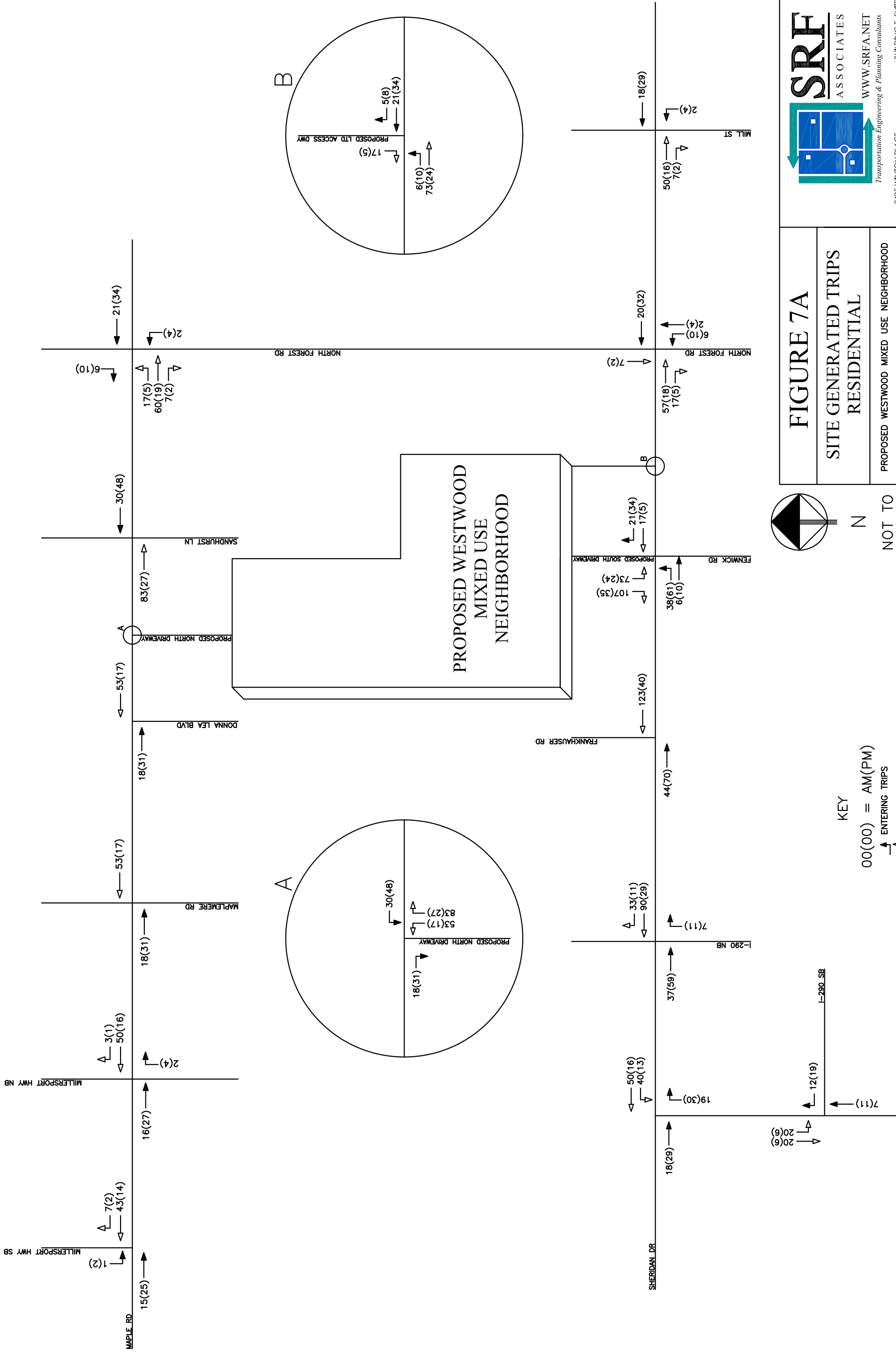
**TRIP DISTRIBUTION
COMMERCIAL/OFFICE**

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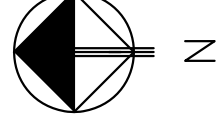
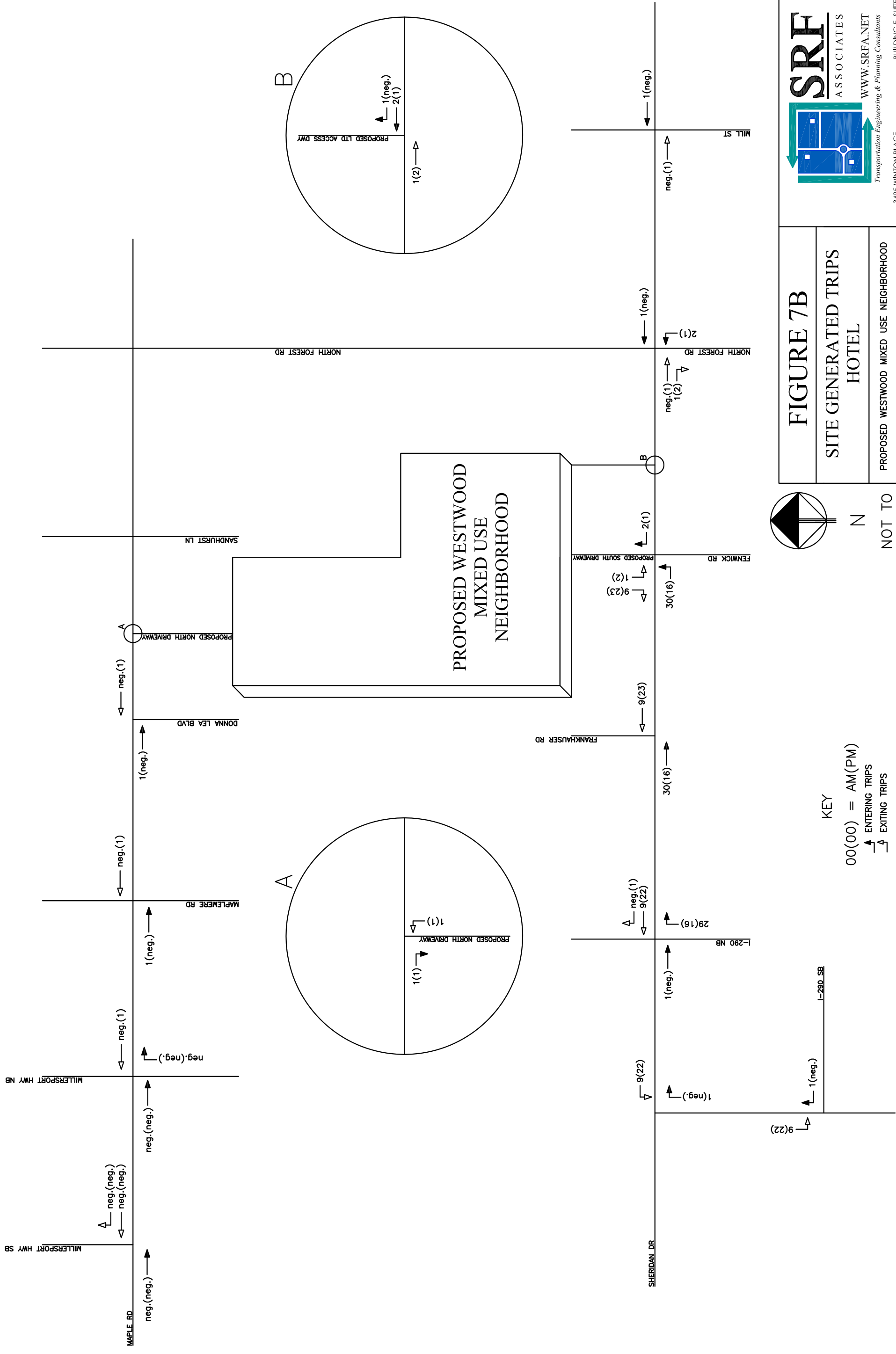


NOT TO SCALE

FIGURE 7A
SITE GENERATED TRIPS
RESIDENTIAL
 PROPOSED WESTWOOD MIXED USE NEIGHBORHOOD
 TOWN OF AMHERST, NEW YORK



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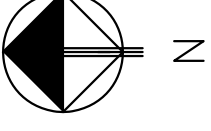
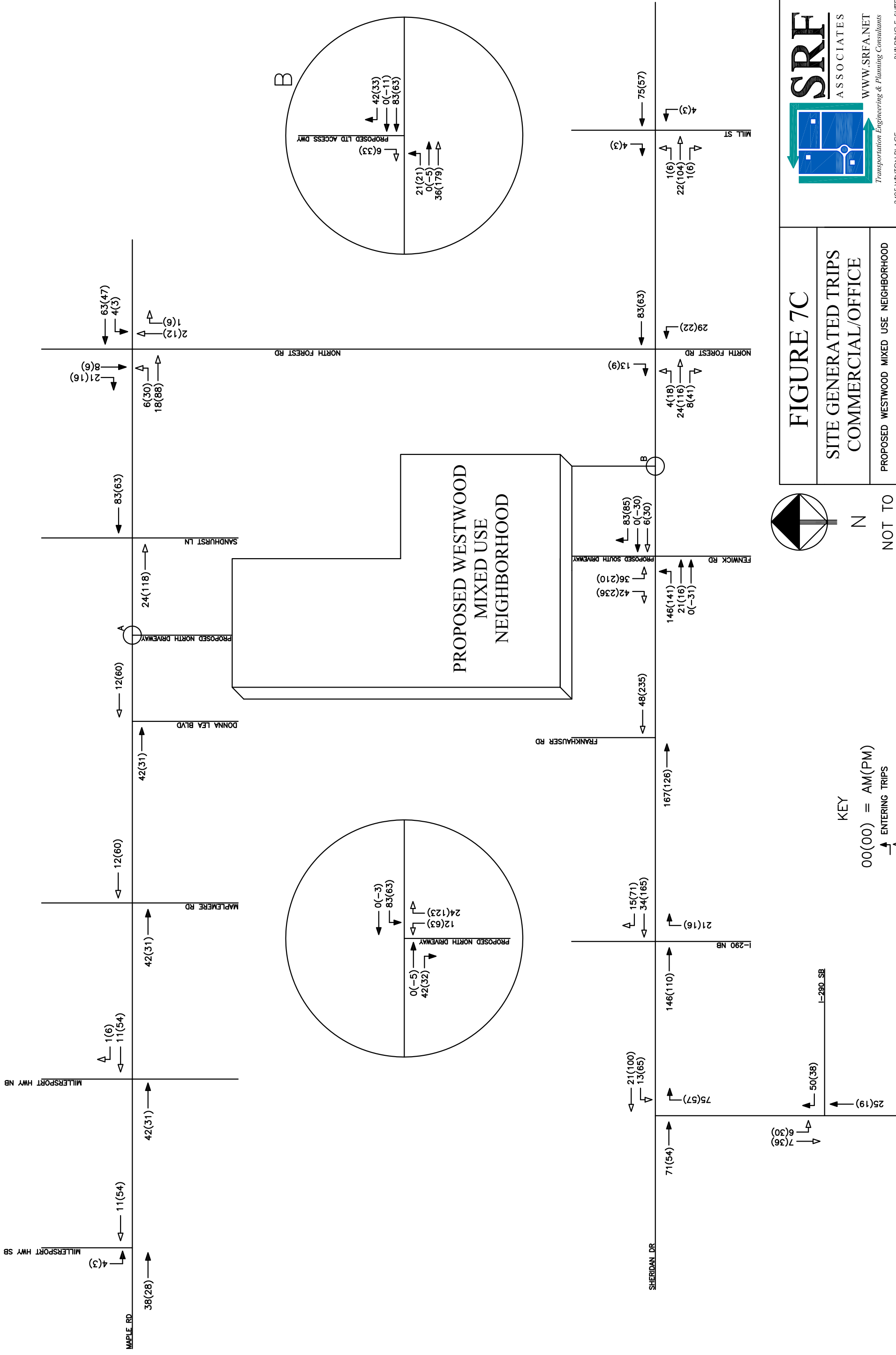


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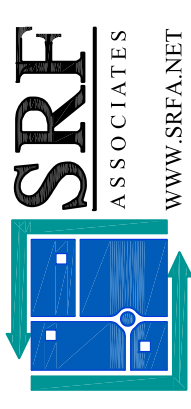
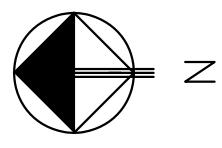
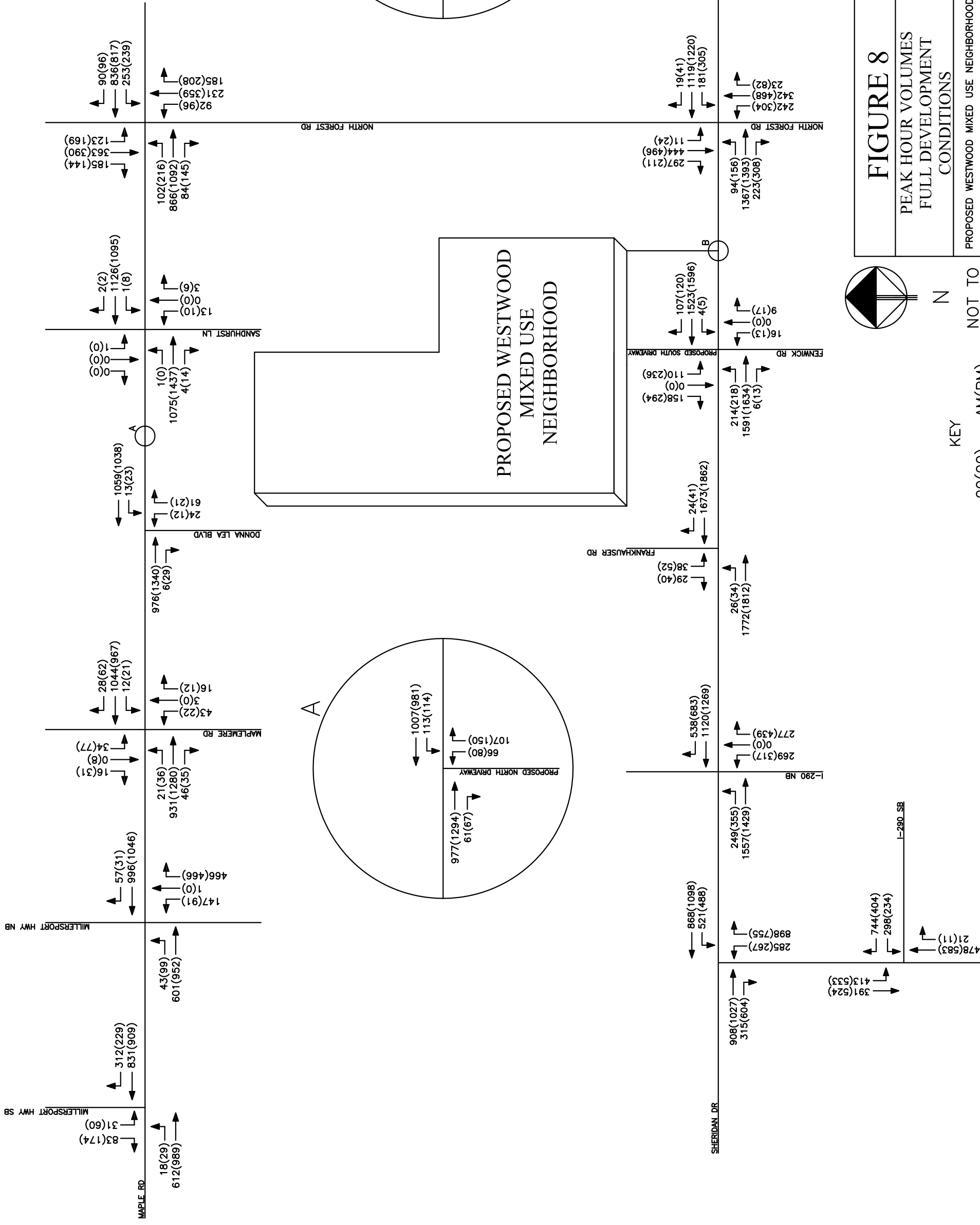
KEY
 00(00) = AM(PM)
 ↑ ENTERING TRIPS
 ↓ EXITING TRIPS
 neg. = NEGLIGIBLE VOLUMES

FIGURE 7B
 SITE GENERATED TRIPS
 HOTEL
 PROPOSED WESTWOOD MIXED USE NEIGHBORHOOD
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PROJECT NO: 33042

PROPOSED WESTWOOD MIXED USE NEIGHBORHOOD
 TOWN OF AMHERST, NEW YORK

APPENDICES

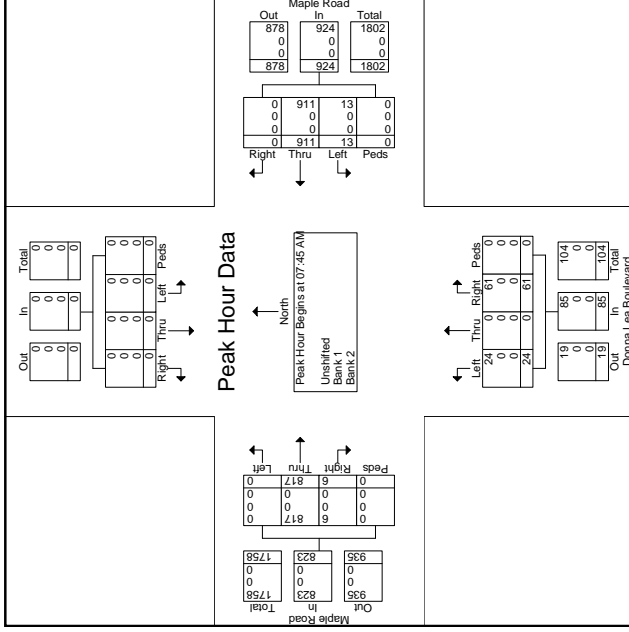
A1

Collected Traffic Volume Data

Groups Printed - Unshifted - Bank 1 - Bank 2

Start Time	Southbound			Maple Road Westbound			Donna Lea Boulevard Northbound			Maple Road Eastbound			Int. Total
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	192	0	0	21	0	192	0	0	439
08:15 AM	0	0	0	0	207	2	0	209	18	0	10	0	372
08:30 AM	0	0	0	0	281	5	0	286	12	0	5	0	480
08:45 AM	0	0	0	0	204	11	0	215	6	0	2	0	395
Total	0	0	0	0	864	18	0	882	36	0	17	0	1696
Grand Total	0	0	0	0	1703	30	0	1733	72	0	24	0	3371
Approch %	0	0	0	0	98.3	1.7	0	99.9	1.1	0	0.0	0	0
Total %	0	0	0	0	50.5	0.9	0	51.4	2.4	0	0.5	0	0
Unshifted	0	0	0	0	1703	30	0	1733	72	0	24	0	3371
% Unshifted	0	0	0	0	100	100	0	100	100	0	100	0	100
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0
Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0

Start Time	Southbound			Maple Road Westbound			Donna Lea Boulevard Northbound			Maple Road Eastbound			Int. Total
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	21	0	192	0	0	259
08:15 AM	0	0	0	0	207	2	0	209	18	0	10	0	372
08:30 AM	0	0	0	0	281	5	0	286	12	0	5	0	490
08:45 AM	0	0	0	0	204	11	0	215	6	0	2	0	383
Total	0	0	0	0	864	18	0	882	36	0	17	0	1696
Grand Total	0	0	0	0	1703	30	0	1733	72	0	24	0	3371
Approch %	0	0	0	0	98.3	1.7	0	99.9	1.1	0	0.0	0	0
Total %	0	0	0	0	50.5	0.9	0	51.4	2.4	0	0.5	0	0
Unshifted	0	0	0	0	1703	30	0	1733	72	0	24	0	3371
% Unshifted	0	0	0	0	100	100	0	100	100	0	100	0	100
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0
Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0





File Name : Harlem.I290SB-AM.PEAK
 Site Code : 1111111
 Start Date : 9/12/2013
 Page No : 1

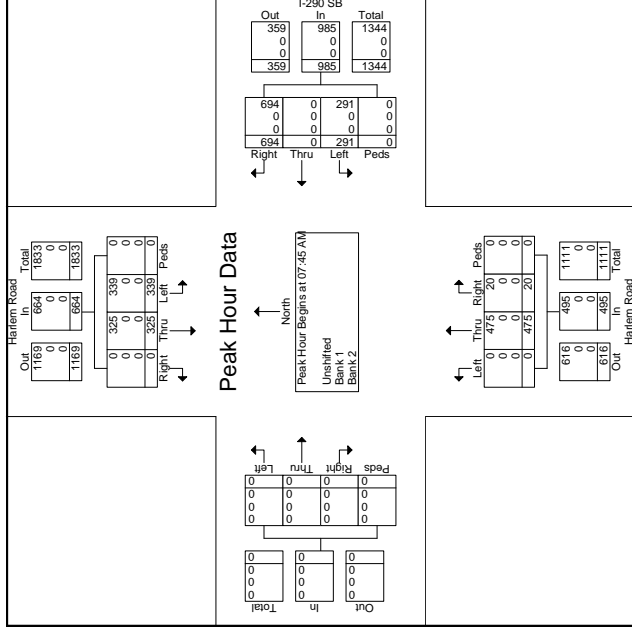
Groups Printed - Unshifted - Bank 1 - Bank 2

Start Time	Harlem Road Southbound			I-290 SB Westbound			Harlem Road Northbound			Eastbound			Int. Total	
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left		Peds
07:00 AM	0	53	184	0	127	0	85	0	5	50	0	0	0	308
07:30 AM	0	107	85	0	127	0	75	1	4	136	0	0	0	567
07:45 AM	0	77	72	0	200	0	104	0	0	103	0	0	0	556
Total	0	321	368	1	640	0	333	1	10	394	0	0	0	2091
08:00 AM	0	92	86	0	163	0	94	0	8	134	0	0	0	577
08:15 AM	0	73	75	0	173	0	49	0	5	132	0	0	0	507
08:30 AM	0	83	106	0	158	0	44	0	7	106	0	0	0	504
08:45 AM	0	47	69	0	145	0	53	0	5	101	0	0	0	420
Total	0	295	336	0	639	0	240	0	25	473	0	0	0	2008
Grand Total	3	616	724	1	1279	0	573	1	35	867	0	0	0	4099
Approch %	0.2	45.8	53.9	0.1	69	0	30.9	0.1	3.9	96.1	0	0	0	0
Total %	0.1	15	17.7	0	31.2	0	14	0	0.9	21.2	0	0	0	0
Unshifted	3	616	724	1	1279	0	573	1	35	867	0	0	0	4099
% Unshifted	100	100	100	100	100	0	100	100	100	100	0	0	0	100
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0



File Name : Harlem.I290SB-AM.PEAK
 Site Code : 1111111
 Start Date : 9/12/2013
 Page No : 2

Start Time	Harlem Road Southbound			I-290 SB Westbound			Harlem Road Northbound			Eastbound			Int. Total	
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left		Peds
07:45 AM	0	77	72	0	149	200	104	0	103	0	0	0	0	556
08:00 AM	0	92	86	0	178	163	94	0	257	8	134	0	0	577
08:15 AM	0	73	75	0	148	173	49	0	222	5	132	0	0	507
08:30 AM	0	83	106	0	158	158	44	0	202	7	106	0	0	504
08:45 AM	0	47	69	0	145	145	53	0	101	5	101	0	0	420
Total	0	321	368	1	640	694	304	0	985	20	475	0	0	2144
Total Volume	0	325	339	0	664	694	304	0	985	20	475	0	0	2144
% Approch	0.00	48.9	51.0	0.00	87.8	76.5	30.00	0.00	83.0	63.5	85.00	0.00	0.00	100.00
% Unshifted	0	325	339	0	664	694	304	0	985	20	475	0	0	2144
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0





File Name : Harlem.I290SB.PM.Peak
 Site Code : 1111111
 Start Date : 9/11/2013
 Page No : 1

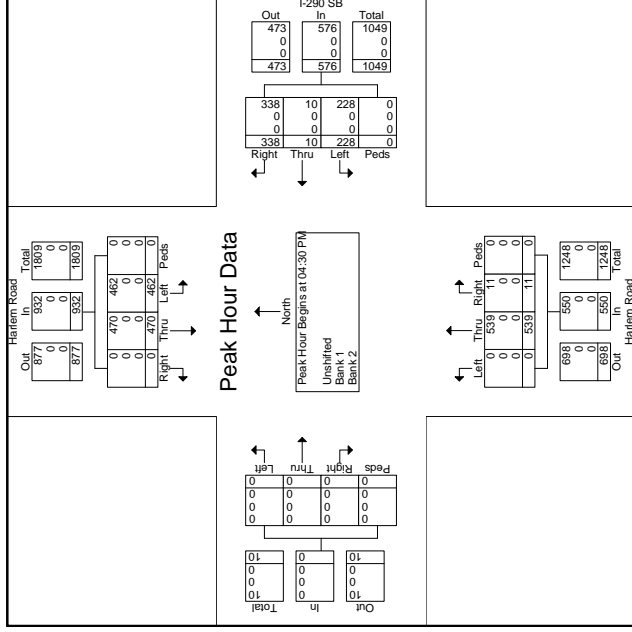
Groups Printed - Unshifted - Bank 1 - Bank 2

Start Time	Harlem Road Southbound			I-290 SB Westbound			Harlem Road Northbound			Eastbound			Int. Total	
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left		Peds
04:00 PM	0	108	170	1	76	0	23	7	14	131	0	0	0	538
04:30 PM	0	108	142	0	77	0	34	0	2	136	0	0	0	453
04:45 PM	0	108	145	0	57	0	11	0	4	126	0	0	0	448
Total	0	452	571	1	270	0	111	7	22	491	0	0	0	1925
05:00 PM	0	123	110	0	115	0	81	0	5	118	0	0	0	552
05:15 PM	0	124	93	0	101	10	98	0	0	179	0	0	0	605
05:30 PM	0	118	82	0	88	0	43	0	6	158	0	0	0	495
05:45 PM	0	118	91	0	55	10	29	0	3	124	0	0	0	420
Total	0	483	376	0	359	10	251	0	14	579	0	0	0	2072
Grand Total	0	935	947	1	629	10	362	7	36	1070	0	0	0	3997
Approch %	0	49.7	50.3	0.1	62.4	1	35.9	0.7	3.3	96.7	0	0	0	0
Total %	0	23.4	23.7	0	15.7	0.3	9.1	0.2	0.9	26.8	0	0	0	0
Unshifted	0	935	947	1	629	10	362	7	36	1070	0	0	0	3997
% Unshifted	0	100	100	100	100	100	100	100	100	100	0	0	0	100
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0



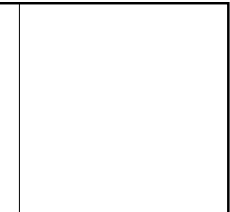
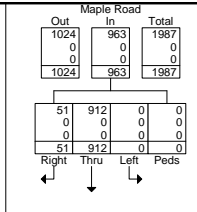
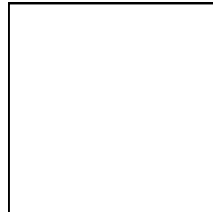
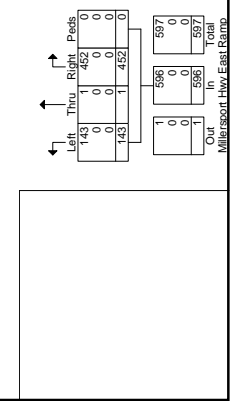
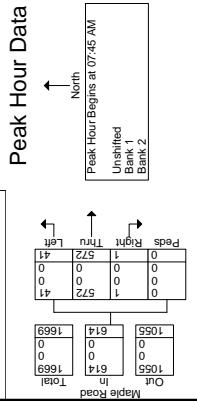
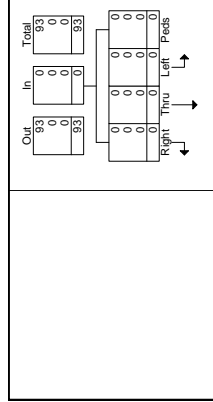
File Name : Harlem.I290SB.PM.Peak
 Site Code : 1111111
 Start Date : 9/11/2013
 Page No : 2

Start Time	Harlem Road Southbound			I-290 SB Westbound			Harlem Road Northbound			Eastbound			Int. Total	
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left		Peds
04:00 PM	0	108	170	1	76	0	23	7	14	131	0	0	0	538
04:30 PM	0	108	142	0	77	0	34	0	2	136	0	0	0	453
04:45 PM	0	108	145	0	57	0	11	0	4	126	0	0	0	448
Total	0	452	571	1	270	0	111	7	22	491	0	0	0	1925
05:00 PM	0	123	110	0	115	0	81	0	5	118	0	0	0	552
05:15 PM	0	124	93	0	101	10	98	0	0	179	0	0	0	605
05:30 PM	0	118	82	0	88	0	43	0	6	158	0	0	0	495
05:45 PM	0	118	91	0	55	10	29	0	3	124	0	0	0	420
Total	0	483	376	0	359	10	251	0	14	579	0	0	0	2072
Grand Total	0	935	947	1	629	10	362	7	36	1070	0	0	0	3997
Approch %	0	49.7	50.3	0.1	62.4	1	35.9	0.7	3.3	96.7	0	0	0	0
Total %	0	23.4	23.7	0	15.7	0.3	9.1	0.2	0.9	26.8	0	0	0	0
Unshifted	0	935	947	1	629	10	362	7	36	1070	0	0	0	3997
% Unshifted	0	100	100	100	100	100	100	100	100	100	0	0	0	100
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0



Start Time	Southbound			Maple Road Westbound			Millersport Hwy East Ramp Northbound			Maple Road Eastbound			Int. Total	
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left		
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	287
07:15 AM	0	0	0	3	121	0	0	0	0	0	0	0	0	368
07:30 AM	0	0	0	3	187	0	0	0	0	0	0	0	0	453
07:45 AM	0	0	0	10	236	0	0	0	0	0	0	0	0	553
Total	0	0	0	20	751	0	0	0	0	0	0	0	0	1668
08:00 AM	0	0	0	7	216	0	0	113	0	47	0	152	10	545
08:15 AM	0	0	0	16	218	0	0	91	0	28	0	130	13	496
08:30 AM	0	0	0	18	240	0	0	117	1	40	0	119	8	544
08:45 AM	0	0	0	23	236	0	0	99	0	40	0	109	12	519
Total	0	0	0	64	910	0	0	420	1	155	0	510	43	2104
Grand Total	0	0	0	84	1661	0	0	788	2	235	0	931	69	3772
Approch %	0	0	0	4.8	95.2	0	0	76.9	0.2	22.9	0	0.2	92.9	6.9
Total %	0	0	0	2.2	44	0	0	20.9	0.1	6.2	0	0.1	24.7	1.8
% Unshifted	0	0	0	84	1660	0	0	788	2	235	0	2	930	69
% Bank 1	0	0	0	100	99.9	0	0	100	100	100	0	100	99.9	100
% Bank 2	0	0	0	0	0.1	0	0	0	0	0	0	0	0.1	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Start Time	Southbound			Maple Road Westbound			Millersport Hwy East Ramp Northbound			Maple Road Eastbound			Int. Total	
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left		
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	588
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	545
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	544
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	544
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	2173
% Appr. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Unshifted	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0

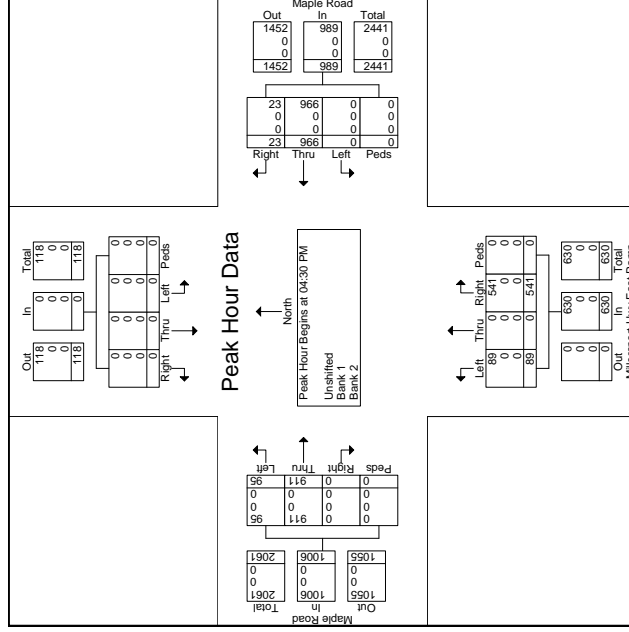




Start Time	Southbound			Maple Road Westbound			Millersport Hwy East Ramp Northbound			Maple Road Eastbound			Int. Total	
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left		
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	608
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	587
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	646
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	646
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	2456
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	615
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	749
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	663
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	629
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	2656
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	5112
Approch %	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Unshifted	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0



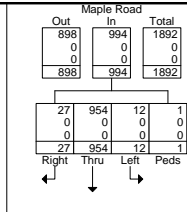
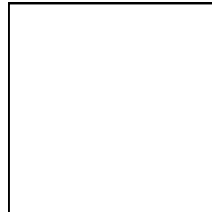
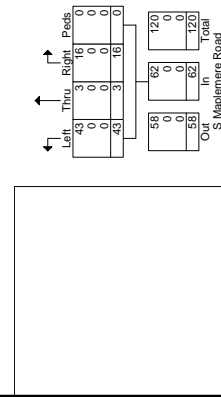
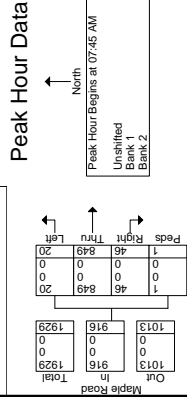
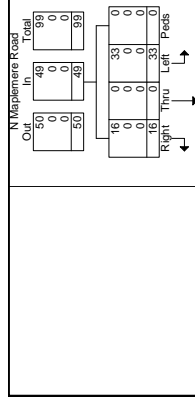
Start Time	Southbound			Maple Road Westbound			Millersport Hwy East Ramp Northbound			Maple Road Eastbound			Int. Total	
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left		
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	646
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	615
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	749
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	2625
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
Unshifted	0	0	0	0	0	0	0	0	0	0	0	0	0	.3876
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0





Start Time	N Maplemere Road Southbound						Maple Road Westbound						S Maplemere Road Northbound						Maple Road Eastbound					
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Total			
07:00 AM	1	0	0	0	1	132	0	0	5	0	7	1	3	91	7	0	248							
07:15 AM	3	0	1	0	3	106	1	0	3	0	4	0	3	170	1	0	339							
07:30 AM	3	3	2	0	7	260	5	1	3	0	3	0	8	217	5	0	553							
07:45 AM	3	0	3	0	7	260	5	1	9	0	11	9	9	246	11	0	553							
Total	10	3	6	0	17	820	11	1	15	2	16	1	24	684	24	0	1634							
08:00 AM	5	0	6	0	6	213	2	0	5	0	21	0	17	216	4	0	495							
08:15 AM	4	0	17	0	5	235	3	0	4	0	6	0	15	193	0	0	482							
08:30 AM	4	0	7	0	9	246	2	0	3	1	14	0	4	194	5	1	490							
08:45 AM	4	0	1	0	5	241	1	0	8	0	8	0	2	187	3	0	460							
Total	17	0	31	0	25	935	8	0	20	1	49	0	38	790	12	1	1927							
Grand Total	27	3	37	0	42	1755	19	1	35	3	65	1	62	1474	36	1	3561							
Approch %	40.3	4.5	55.2	0	2.3	96.6	1	0.1	33.7	2.9	62.5	1	3.9	93.7	2.3	0.1								
Total %	0.8	0.1	1	0	1.2	49.3	0.5	0	1	0.1	1.8	0	1.7	41.4	1	0								
Unshifted	27	3	37	0	42	1755	19	1	35	3	65	1	62	1474	36	1								
% Unshifted	100	100	100	0	100	100	100	100	100	100	100	100	100	100	100	100								
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								

Start Time	N Maplemere Road Southbound						Maple Road Westbound						S Maplemere Road Northbound						Maple Road Eastbound					
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Total			
07:45 AM	3	0	3	0	6	7	260	5	1	273	4	2	2	0	8	10	246	11	267					
08:00 AM	5	0	17	0	21	5	235	3	0	243	4	0	6	0	10	15	193	0	208					
08:15 AM	4	0	7	0	11	9	246	2	0	187	3	0	8	0	11	15	193	0	208					
08:30 AM	4	0	1	0	5	241	1	0	187	3	0	460	4	0	1	0	5	241	1	0	2021			
Total	16	0	33	0	49	27	954	12	1	994	16	3	43	0	62	46	849	20	1	916				
% App. Total	32.7	0	67.3	0	2.7	96.1	1.2	0.1	25.8	4.8	69.4	0	0	0	0	5	92.7	2.2	0.1					
PHF	.800	.000	.485	.000	.583	.750	.917	.600	.250	.910	.800	.375	.512	.000	.596	.676	.863	.455	.250	.658	.912			
Unshifted	16	0	33	0	49	27	954	12	1	994	16	3	43	0	62	46	849	20	1	916	2021			
% Unshifted	100	0	100	0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100			
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			

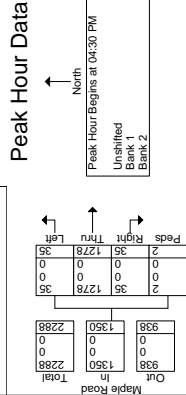
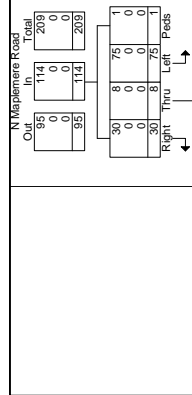




Start Time	N Maplemere Road Southbound				Maple Road Westbound				S Maplemere Road Northbound				Maple Road Eastbound				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
04:00 PM	10	1	13	0	10	165	10	0	3	2	6	0	5	268	7	0	321
04:15 PM	10	1	13	0	15	196	3	0	5	0	5	0	6	231	8	0	615
04:30 PM	10	4	18	0	12	217	5	1	2	0	4	1	9	310	8	1	632
04:45 PM	5	0	14	0	16	202	5	0	2	0	4	0	5	290	7	1	552
Total	35	6	58	0	54	600	24	1	13	2	19	1	25	1150	31	2	2221
05:00 PM	7	3	17	1	15	212	5	0	1	0	6	0	8	340	8	0	623
05:15 PM	8	1	26	0	17	255	5	0	6	0	8	0	13	308	12	0	659
05:30 PM	9	0	30	0	17	202	1	2	4	1	4	0	7	261	7	0	545
05:45 PM	7	3	14	1	14	218	3	7	0	1	7	0	3	267	3	0	548
Total	31	7	87	2	63	887	14	9	11	2	25	0	31	1176	30	0	2375
Grand Total	66	13	145	2	117	1687	38	10	24	4	44	1	56	2326	61	2	4596
Approch %	29.2	5.8	64.2	0.9	6.3	91.1	2.1	0.5	32.9	5.5	60.3	1.4	2.3	95.1	2.5	0.1	
Total %	1.4	0.3	3.2	0	2.5	36.7	0.8	0.2	0.5	0.1	1	0	1.2	50.6	1.3	0	
Unshifted	66	13	145	2	117	1687	38	10	24	4	44	1	56	2326	61	2	4596
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

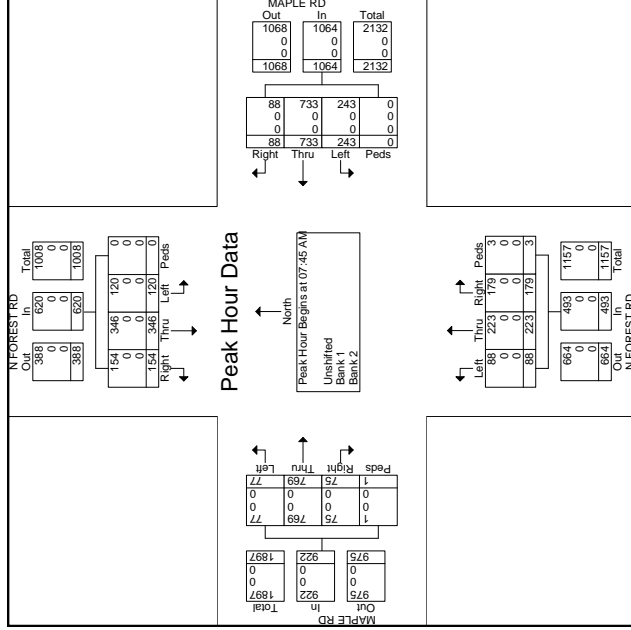


Start Time	N Maplemere Road Southbound				Maple Road Westbound				S Maplemere Road Northbound				Maple Road Eastbound				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
04:30 PM	10	4	18	0	12	217	5	1	6	1	6	0	7	8	340	8	632
04:45 PM	5	0	14	0	16	202	5	0	232	1	0	6	0	7	13	308	623
05:00 PM	7	3	17	1	28	15	212	5	0	277	6	0	8	14	13	308	659
05:15 PM	8	1	26	0	35	17	285	5	0	277	6	0	8	14	13	308	659
Total	30	8	75	1	60	886	21	1	968	12	0	22	1	35	35	1278	2467
% App. Total	26.3	7	65.8	0.9	6.2	91.5	2.2	0.1	34.3	0	62.9	2.9	2.6	94.7	2.6	0.1	.943
PHF	.750	.500	.721	.250	.814	.882	.869	.875	.250	.874	.500	.000	.698	.250	.625	.873	.940
Unshifted	30	8	75	1	60	886	21	1	968	12	0	22	1	35	35	1278	2467
% Unshifted	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



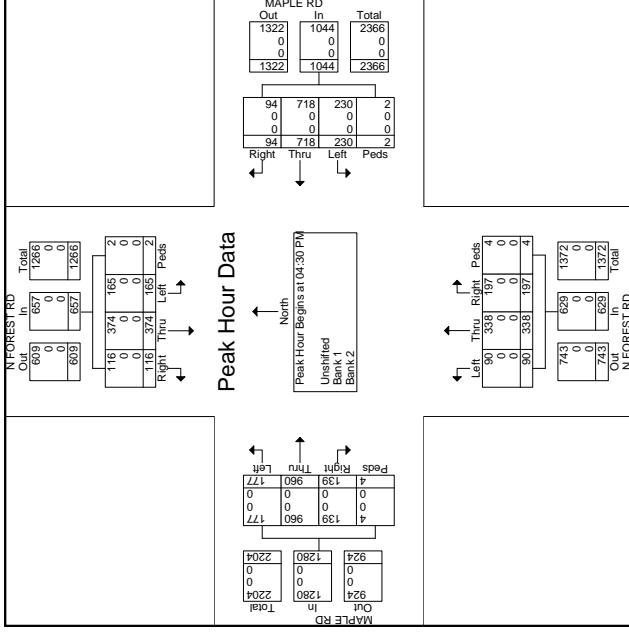
Start Time	N FOREST RD Southbound						MAPLE RD Westbound						N FOREST RD Northbound						MAPLE RD Eastbound					
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
07:00 AM	9	43	16	0	17	166	62	0	26	26	13	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	26	67	26	0	20	199	74	1	30	44	12	0	17	122	7	0	0	0	0	0	0	0	0	0
07:30 AM	37	89	26	0	20	179	84	0	38	43	15	0	17	155	17	0	0	0	0	0	0	0	0	0
07:45 AM	50	105	38	0	23	187	64	0	39	63	23	0	8	227	22	0	0	0	0	0	0	0	0	0
Total	132	304	100	0	69	641	270	1	137	174	64	0	52	601	54	0	0	0	0	0	0	0	0	2599
08:00 AM	33	80	24	0	16	175	60	0	47	48	16	3	21	180	19	0	0	0	0	0	0	0	0	722
08:15 AM	36	77	25	0	29	192	59	0	51	45	23	0	24	178	18	0	0	0	0	0	0	0	0	757
08:30 AM	35	84	33	0	20	179	60	0	42	69	26	0	22	184	18	1	0	0	0	0	0	0	0	773
08:45 AM	30	68	37	0	32	196	63	0	31	55	20	0	16	146	17	0	0	0	0	0	0	0	0	711
Total	134	309	119	0	97	742	242	0	171	217	85	3	83	688	72	1	0	0	0	0	0	0	0	2963
Grand Total	266	613	219	0	166	1383	512	1	308	391	149	3	135	1289	126	1	0	0	0	0	0	0	0	5562
Approch %	24.2	55.8	19.9	0	8.1	67.1	24.8	0	36.2	45.9	17.5	0.4	8.7	83.1	8.1	0.1	0	0	0	0	0	0	0	0
Total %	4.8	11	3.9	0	3	24.9	9.2	0	5.5	7	2.7	0.1	2.4	23.2	2.3	0	0	0	0	0	0	0	0	0
Unshifted	266	613	219	0	166	1383	512	1	308	391	149	3	135	1289	126	1	0	0	0	0	0	0	0	5562
% Unshifted	100	100	100	0	100	100	100	100	100	100	100	100	100	100	100	100	0	0	0	0	0	0	0	100
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Start Time	N FOREST RD Southbound						MAPLE RD Westbound						N FOREST RD Northbound						MAPLE RD Eastbound						
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:45 AM	50	105	38	0	193	23	187	64	33	80	24	0	137	16	175	60	0	251	47	48	16	3	227	22	257
08:00 AM	33	80	24	0	136	29	192	59	0	280	51	45	23	0	119	24	178	18	0	220	18	0	0	0	757
08:15 AM	35	84	33	0	132	20	179	60	0	259	42	69	26	0	137	22	184	18	1	225	18	1	0	0	773
08:30 AM	30	68	37	0	80	32	196	63	0	31	55	20	0	16	146	17	0	0	0	0	0	0	0	0	711
Total	134	309	119	0	97	742	242	0	171	217	85	3	83	688	72	1	0	0	0	0	0	0	0	0	2963
Grand Total	266	613	219	0	166	1383	512	1	308	391	149	3	135	1289	126	1	0	0	0	0	0	0	0	0	5562
Approch %	24.2	55.8	19.9	0	8.1	67.1	24.8	0	36.2	45.9	17.5	0.4	8.7	83.1	8.1	0.1	0	0	0	0	0	0	0	0	0
Total %	4.8	11	3.9	0	3	24.9	9.2	0	5.5	7	2.7	0.1	2.4	23.2	2.3	0	0	0	0	0	0	0	0	0	0
Unshifted	266	613	219	0	166	1383	512	1	308	391	149	3	135	1289	126	1	0	0	0	0	0	0	0	0	5562
% Unshifted	100	100	100	0	100	100	100	100	100	100	100	100	100	100	100	100	0	0	0	0	0	0	0	0	100
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



Start Time	N FOREST RD Southbound				MAPLE RD Westbound				N FOREST RD Northbound				MAPLE RD Eastbound				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
04:00 PM	21	178	33	2	2	17	165	51	0	54	87	1	0	25	238	1	0
04:30 PM	28	185	35	0	0	56	81	29	0	55	81	29	0	32	136	27	1
04:45 PM	28	171	27	0	0	28	150	54	0	58	85	24	0	48	219	40	1
05:00 PM	26	101	40	2	16	180	56	0	46	95	22	1	27	268	48	2	915
Total	100	356	135	4	80	684	230	0	211	343	106	1	155	689	166	3	3443
05:00 PM	33	102	54	0	34	168	56	2	55	83	22	3	31	219	41	0	903
05:15 PM	32	100	44	0	16	211	64	0	40	80	22	0	33	266	48	1	957
05:30 PM	36	81	48	0	35	171	52	0	48	90	23	0	32	243	37	0	896
05:45 PM	30	79	47	0	25	174	53	0	48	64	29	0	23	210	39	0	821
Total	131	362	183	0	110	724	225	2	191	317	96	3	119	938	165	1	3577
Grand Total	231	718	328	4	190	1408	455	2	402	660	202	4	254	1827	331	4	7020
Approch %	18	56	25.6	0.3	9.2	68.5	22.1	0.1	31.7	52.1	15.9	0.3	10.5	75.6	13.7	0.2	
Total %	3.3	10.2	4.7	0.1	2.7	20.1	6.5	0.2	5.7	9.4	2.9	0.1	3.6	26	4.7	0.1	
Unshifted	231	718	328	4	190	1408	455	2	402	660	202	4	254	1827	331	4	7020
% Unshifted	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Start Time	N FOREST RD Southbound				MAPLE RD Westbound				N FOREST RD Northbound				MAPLE RD Eastbound				Int. Total			
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds				
04:30 PM	25	71	27	0	28	159	54	0	241	56	24	1	161	27	256	48	2			
04:45 PM	26	101	40	2	169	16	180	56	2	252	46	92	22	3	163	31	219	41	0	
05:00 PM	33	102	54	0	189	34	168	56	2	260	55	83	22	3	163	31	219	41	0	
05:15 PM	32	100	44	0	176	16	211	64	0	291	40	80	22	4	142	33	266	48	1	
Total	116	374	165	2	567	94	718	230	2	1044	197	338	90	4	629	139	960	177	4	
Total Volume	116	374	165	2	567	94	718	230	2	1044	197	338	90	4	629	139	960	177	4	
% Appr. Total	17.7	56.9	25.1	0.3	9	68.8	22	0.2	31.3	53.7	14.3	0.6	10.9	17.5	13.8	0.3	13.8	0.3	361.0	
% Unshifted	37.9	317	174	29	869	691	263	896	250	897	309	318	393	333	365	174	602	322	500	943
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	



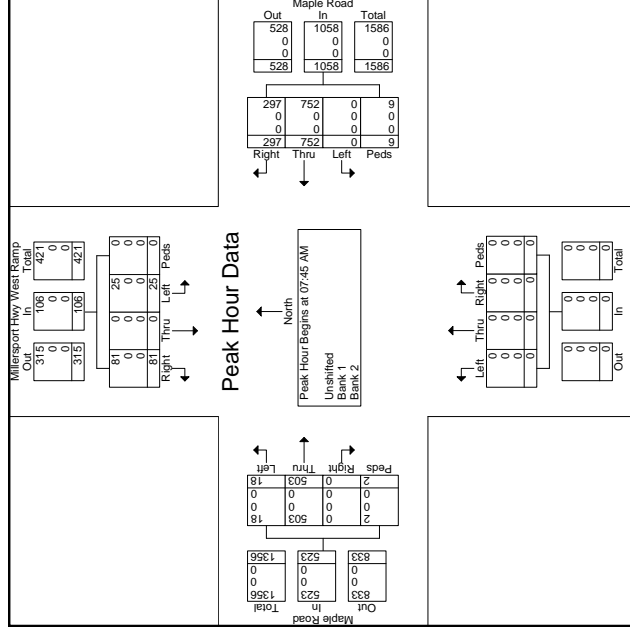


File Name : Maple.MillersportWestRamp.AM.Peak
 Site Code : 33333333
 Start Date : 11/14/2012
 Page No : 1

Start Time	Millersport Hwy West Ramp Southbound				Maple Road Westbound				Northbound				Maple Road Eastbound				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:00 AM	9	1	3	0	67	176	0	1	0	0	0	0	62	1	0	0	220
07:15 AM	11	0	1	0	84	143	0	0	0	0	0	0	73	2	0	0	314
07:30 AM	20	0	2	0	82	186	0	0	0	0	0	0	117	4	1	0	443
07:45 AM	28	0	6	0	82	186	0	0	0	0	0	0	131	4	1	0	443
Total	68	1	12	0	324	567	0	4	0	0	0	0	383	10	1	0	1380
08:00 AM	20	0	7	0	74	171	0	1	0	0	0	0	140	4	0	0	417
08:15 AM	17	0	8	0	76	188	0	0	0	0	0	0	124	4	0	0	417
08:30 AM	16	0	4	0	66	204	0	5	0	0	0	0	108	6	1	0	410
08:45 AM	27	0	4	0	67	203	0	1	0	0	0	0	110	2	0	0	414
Total	80	0	23	0	283	766	0	7	0	0	0	0	482	16	1	0	1658
Grand Total	148	1	35	0	607	1333	0	11	0	0	0	0	875	26	2	0	3038
Approch %	80.4	0.5	19	0	31.1	68.3	0	0.6	0	0	0	0	96.9	2.9	0.2	0	
Total %	4.9	0	1.2	0	20	43.9	0	0.4	0	0	0	0	28.8	0.9	0.1	0	
Unshifted	148	1	35	0	607	1333	0	11	0	0	0	0	875	26	2	0	3038
% Unshifted	100	100	100	0	100	100	0	100	0	0	0	0	100	100	100	0	100
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

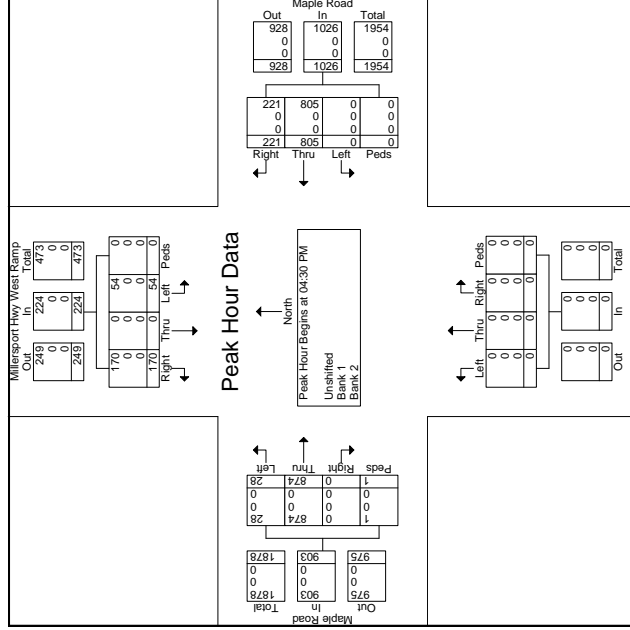
File Name : Maple.MillersportWestRamp.AM.Peak
 Site Code : 33333333
 Start Date : 11/14/2012
 Page No : 2

Start Time	Millersport Hwy West Ramp Southbound				Maple Road Westbound				Northbound				Maple Road Eastbound				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:45 AM	28	0	7	0	81	171	0	1	0	0	0	0	0	0	0	0	144
08:00 AM	17	0	8	0	74	171	0	5	0	0	0	0	0	0	0	0	115
08:15 AM	16	0	4	0	20	204	0	9	0	0	0	0	0	0	0	0	1687
Total Volume	81	0	25	0	106	297	752	0	9	1058	0	0	0	0	0	0	443
% App. Total	76.4	0	23.6	0	28.1	71.1	0	0.9	0	0	0	0	0	0	0	0	417
PHF	.723	.000	.781	.000	.779	.917	.922	.000	.450	.962	.000	.000	.000	.000	.899	.750	.952
Unshifted	81	0	25	0	106	297	752	0	9	1058	0	0	0	0	0	0	1687
% Unshifted	100	0	100	0	100	100	100	0	100	100	0	0	0	0	0	0	100
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



Start Time	Millersport Hwy West Ramp Southbound						Maple Road Westbound						Northbound						Maple Road Eastbound					
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds				
04:00 PM	28	0	8	0	60	175	0	0	0	0	0	0	0	174	10	0	0	0	0	0	0	485		
04:15 PM	35	0	10	0	65	161	0	0	0	0	0	0	0	178	7	0	0	0	0	0	0	469		
04:30 PM	28	0	12	0	57	208	0	0	0	0	0	0	0	208	7	0	0	0	0	0	0	528		
04:45 PM	28	0	12	0	57	208	0	0	0	0	0	0	0	208	4	0	0	0	0	0	0	528		
Total	128	0	40	0	241	750	0	0	0	0	0	0	0	768	21	0	0	0	0	0	0	1949		
05:00 PM	51	0	18	0	44	192	0	0	0	0	0	0	0	246	5	1	0	0	0	0	0	557		
05:15 PM	54	0	14	0	61	219	0	0	0	0	0	0	0	211	12	0	0	0	0	0	0	571		
05:30 PM	40	0	8	0	54	203	0	0	0	0	0	0	0	175	3	0	0	0	0	0	0	483		
05:45 PM	26	0	6	0	50	202	0	10	0	0	0	0	0	180	3	1	0	0	0	0	0	478		
Total	171	0	46	0	209	816	0	10	0	0	0	0	0	812	23	2	0	0	0	0	0	2089		
Grand Total	299	0	86	0	450	1566	0	10	0	0	0	0	0	1581	44	2	0	0	0	0	0	4038		
Approch %	77.7	0	22.3	0	22.2	77.3	0	0.5	0	0	0	0	0	97.2	2.7	0.1	0	0	0	0	0	0		
Total %	7.4	0	2.1	0	11.1	38.8	0	0.2	0	0	0	0	0	39.2	1.1	0	0	0	0	0	0	0		
Unshifted	299	0	86	0	450	1566	0	10	0	0	0	0	0	1581	44	2	0	0	0	0	0	4038		
% Unshifted	100	0	100	0	100	100	0	100	0	0	0	0	0	100	100	100	0	0	0	0	0	100		
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		

Start Time	Millersport Hwy West Ramp Southbound						Maple Road Westbound						Northbound						Maple Road Eastbound					
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds				
04:30 PM	37	0	10	0	47	186	0	0	0	0	0	0	0	235	0	0	0	0	0	0	0	497		
04:45 PM	28	0	12	0	40	67	0	0	0	0	0	0	0	236	0	0	0	0	0	0	0	557		
05:00 PM	51	0	18	0	69	44	192	0	0	0	0	0	0	280	0	0	0	0	0	0	0	571		
05:15 PM	54	0	18	0	72	44	219	0	0	0	0	0	0	280	0	0	0	0	0	0	0	571		
Total Volume	170	0	54	0	224	805	0	0	0	0	0	0	0	1026	0	0	0	0	0	0	0	2153		
% App. Total	75.9	0	24.1	0	21.5	76.5	0	0	0	0	0	0	0	91.6	0	0	0	0	0	0	0	943		
PHF	.787	.000	.750	.000	.812	.919	.000	.000	.000	.000	.000	.000	.000	.916	.000	.000	.000	.000	.000	.000	.000	.943		
Unshifted	170	0	54	0	224	805	0	0	0	0	0	0	0	1026	0	0	0	0	0	0	0	2153		
% Unshifted	100	0	100	0	100	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	100		
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		





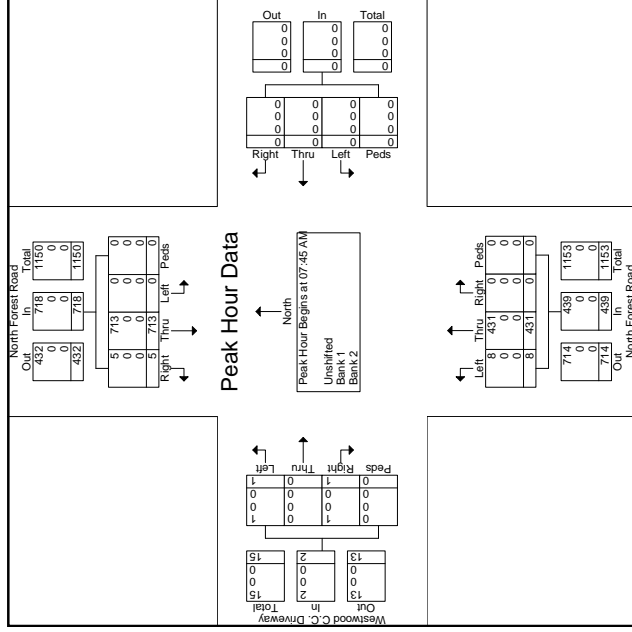
File Name : NorthForest.CCDriveway-AM.PEAK
 Site Code : 22222222
 Start Date : 9/12/2013
 Page No : 1

Start Time	North Forest Road Southbound			Westbound			North Forest Road Northbound			Westwood C.C. Driveway Eastbound			Int. Total	
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left		Peds
07:00 AM	1	165	0	0	0	0	0	0	0	0	0	0	0	209
07:30 AM	1	280	0	0	0	0	0	0	0	0	0	0	0	292
07:45 AM	2	190	0	0	0	0	0	0	0	0	0	0	0	312
Total	6	730	0	0	0	0	0	0	0	0	0	0	0	285
08:00 AM	1	175	0	0	0	0	0	0	0	0	0	0	0	1091
08:15 AM	0	184	0	0	0	0	0	0	0	0	0	0	0	288
08:30 AM	2	164	0	0	0	0	0	0	0	0	0	0	0	316
08:45 AM	1	157	0	0	0	0	0	0	0	0	0	0	0	270
Total	4	680	0	0	0	0	0	0	0	0	0	0	0	273
Grand Total	10	1410	0	0	0	0	0	0	0	0	0	0	0	1147
Approch %	0.7	99.3	0	0	0	0	0	0	0	0	0	0	0	2238
Total %	0.4	63	0	0	0	0	0	0	0	0	0	0	0	16.7
Unshifted	10	1410	0	0	0	0	0	0	0	0	0	0	0	2238
% Unshifted	100	100	0	0	0	0	0	0	0	0	0	0	0	100
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0



File Name : NorthForest.CCDriveway-AM.PEAK
 Site Code : 22222222
 Start Date : 9/12/2013
 Page No : 2

Start Time	North Forest Road Southbound			Westbound			North Forest Road Northbound			Westwood C.C. Driveway Eastbound			Int. Total	
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left		Peds
07:45 AM	2	190	0	0	0	0	0	0	0	0	0	0	0	285
08:00 AM	1	175	0	0	0	0	0	0	0	0	0	0	0	288
08:15 AM	0	184	0	0	0	0	0	0	0	0	0	0	0	316
08:30 AM	2	164	0	0	0	0	0	0	0	0	0	0	0	288
08:45 AM	1	157	0	0	0	0	0	0	0	0	0	0	0	270
Total	6	730	0	0	0	0	0	0	0	0	0	0	0	1091
Total Volume	5	713	0	0	0	0	0	0	0	0	0	0	0	288
% Appr Total	0.7	99.3	0	0	0	0	0	0	0	0	0	0	0	2238
Unshifted	5	713	0	0	0	0	0	0	0	0	0	0	0	100
% Unshifted	100	100	0	0	0	0	0	0	0	0	0	0	0	100
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0





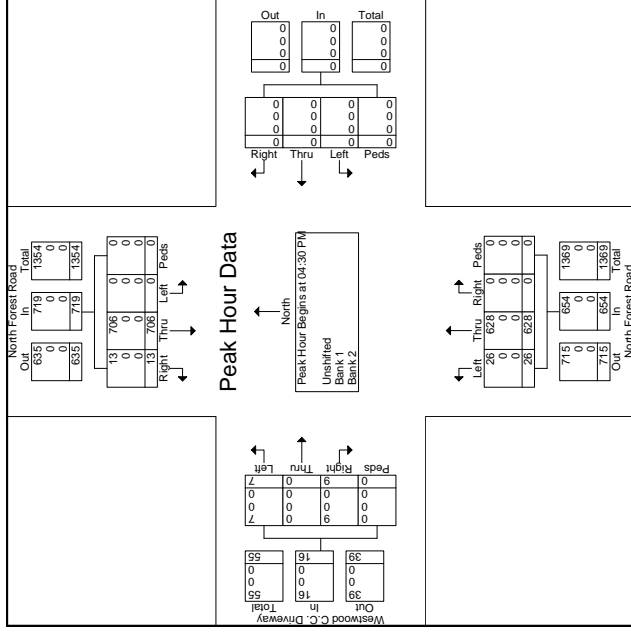
File Name : NorthForest.CCDriveway.PM.Peak
 Site Code : 11111111
 Start Date : 9/11/2013
 Page No : 1

Start Time	North Forest Road Southbound			Westbound			North Forest Road Northbound			Westwood C.C. Driveway Eastbound			Int. Total	
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left		Peds
04:00 PM	5	168	0	0	0	0	0	156	3	0	4	0	0	383
04:15 PM	2	168	0	0	0	0	0	154	3	0	4	0	1	383
04:30 PM	2	162	0	0	0	0	0	153	3	0	6	0	2	324
04:45 PM	2	168	0	0	0	0	0	153	8	0	2	0	1	334
Total	9	664	0	0	0	0	1	646	17	0	16	0	5	1358
05:00 PM	6	194	0	0	0	0	0	134	6	0	0	0	1	341
05:15 PM	5	182	0	0	0	0	0	188	9	0	1	0	3	388
05:30 PM	3	198	0	0	0	0	0	171	11	0	12	0	4	399
05:45 PM	6	166	0	0	0	0	0	191	14	0	5	0	1	383
Total	20	740	0	0	0	0	0	684	40	0	18	0	9	1511
Grand Total	29	1404	0	0	0	0	1	1330	57	0	34	0	14	2869
Approch %	2	98	0	0	0	0	0	95.8	4.1	0	70.8	0	29.2	0
Total %	1	48.9	0	0	0	0	0	46.4	2	0	1.2	0	0.5	0
Unshifted	28	1404	0	0	0	0	1	1330	57	0	34	0	14	2869
% Unshifted	100	100	0	0	0	0	100	100	100	0	100	0	100	100
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0



File Name : NorthForest.CCDriveway.PM.Peak
 Site Code : 11111111
 Start Date : 9/11/2013
 Page No : 2

Start Time	North Forest Road Southbound			Westbound			North Forest Road Northbound			Westwood C.C. Driveway Eastbound			Int. Total	
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left		Peds
04:30 PM	0	162	0	0	0	0	0	153	3	0	156	6	8	326
04:45 PM	2	168	0	0	0	0	0	153	8	0	161	2	1	334
05:00 PM	6	194	0	0	0	0	0	134	6	0	140	0	3	341
05:15 PM	5	182	0	0	0	0	0	188	9	0	197	1	0	389
05:45 PM	6	166	0	0	0	0	0	191	14	0	204	7	0	389
Total	19	712	0	0	0	0	0	628	26	0	654	9	0	1389
% Unshifted	13	706	0	0	0	0	0	628	26	0	654	9	0	1389
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0



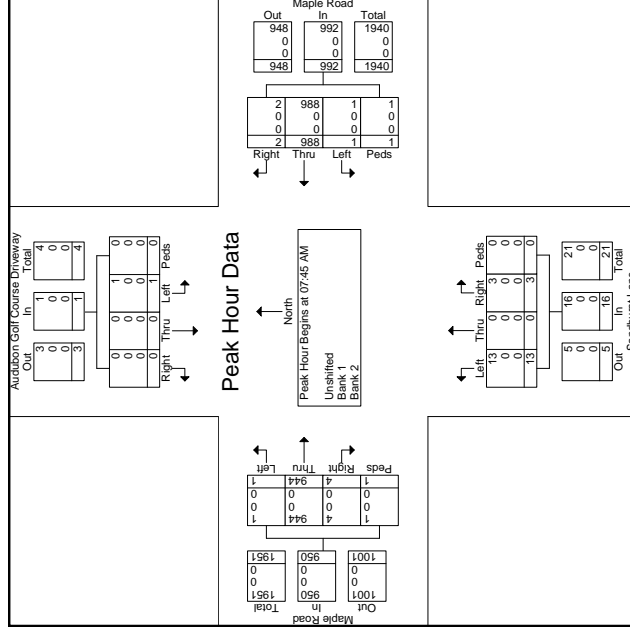


Start Time	Groups Printed- Unshifted - Bank 1 - Bank 2															
	Audubon Golf Course Driveway Southbound			Maple Road Westbound			Sandhurst Lane Northbound			Maple Road Eastbound						
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
07:00 AM	0	0	0	0	0	0	2	0	3	0	0	0	0	107	0	262
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	145	0	360
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	210	0	543
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	272	1	483
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	734	1	1618
08:00 AM	0	0	0	0	221	0	0	0	0	0	0	0	0	220	0	446
08:15 AM	0	0	0	0	246	0	0	0	0	0	0	0	0	234	0	487
08:30 AM	0	0	0	0	260	0	0	0	0	0	0	0	0	218	0	483
08:45 AM	0	0	0	0	244	0	0	0	0	0	0	0	0	211	0	462
Total	0	0	0	0	971	0	0	0	0	0	0	0	0	883	0	1878
Grand Total	0	0	0	0	1824	0	0	0	0	0	0	0	0	1617	1	3496
Approch %	0	0	0	0.1	99.7	0.1	0.1	28.6	0	0.3	99.6	0.1	0.1	46.3	0	0
Total %	0	0	0	0.1	52.2	0.1	0	0.3	0	0.1	46.3	0	0	1	0	0
% Unshifted	0	0	0	0	100	100	0	100	100	0	100	100	0	100	100	100
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



Start Time	Audubon Golf Course Driveway Southbound												Maple Road Westbound			Sandhurst Lane Northbound			Maple Road Eastbound		
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total		
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	275		
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	235		
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	218		
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1959		
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.902		
% App. Total	.000	.000	.000	.250	.250	.250	.250	.250	.250	.250	.250	.250	.250	.250	.250	.250	.250	.250	.864		
Unshifted	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1959		
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		

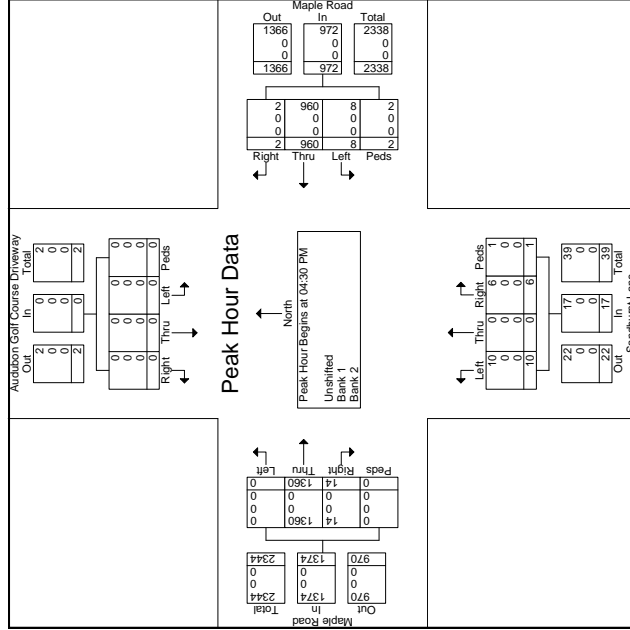
Peak Hour Data



Start Time	Audubon Golf Course Driveway Southbound						Maple Road Westbound						Sandhurst Lane Northbound						Maple Road Eastbound						
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	965
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	472
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	524
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	601
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2181
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	601
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	618
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	547
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	530
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2296
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4477
Approach %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unshifted	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Start Time	Audubon Golf Course Driveway Southbound						Maple Road Westbound						Sandhurst Lane Northbound						Maple Road Eastbound						
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Total
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	620
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	524
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	359
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	601
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2363
% App. Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.953
Unshifted	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Banked	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Peak Hour Data



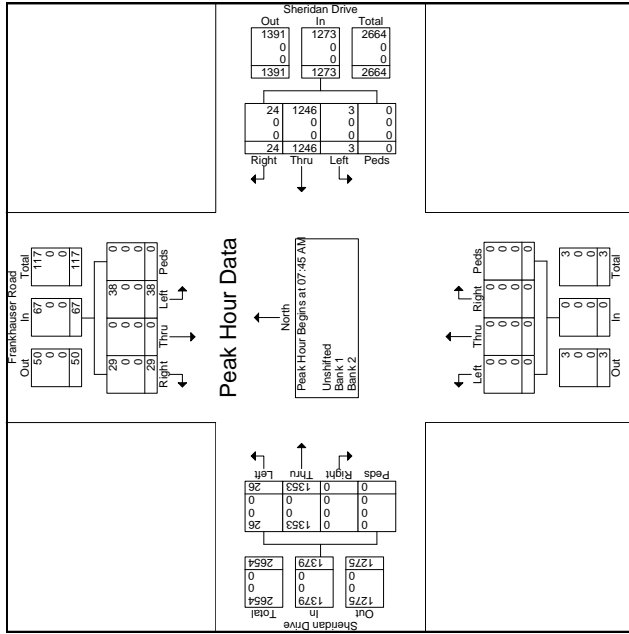


Start Time	Frankhauser Road Southbound					Sheridan Drive Westbound					Northbound					Sheridan Drive Eastbound					
	Right	Thru	Left	Peds	Int. Total	Right	Thru	Left	Peds	Int. Total	Right	Thru	Left	Peds	Int. Total	Right	Thru	Left	Peds	Int. Total	
07:00 AM	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approch %	38.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total %	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unshifted	53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Unshifted	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Start Time	Frankhauser Road Southbound					Sheridan Drive Westbound					Northbound					Sheridan Drive Eastbound				
	Right	Thru	Left	Peds	Int. Total	Right	Thru	Left	Peds	Int. Total	Right	Thru	Left	Peds	Int. Total	Right	Thru	Left	Peds	Int. Total
07:00 AM	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approch %	38.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total %	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unshifted	53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Unshifted	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



Groups Printed- Unshifted - Bank 1 - Bank 2





File Name : Sheridan.Fenwick-AM.Peak
 Site Code : 12121212
 Start Date : 9/12/2013
 Page No : 1

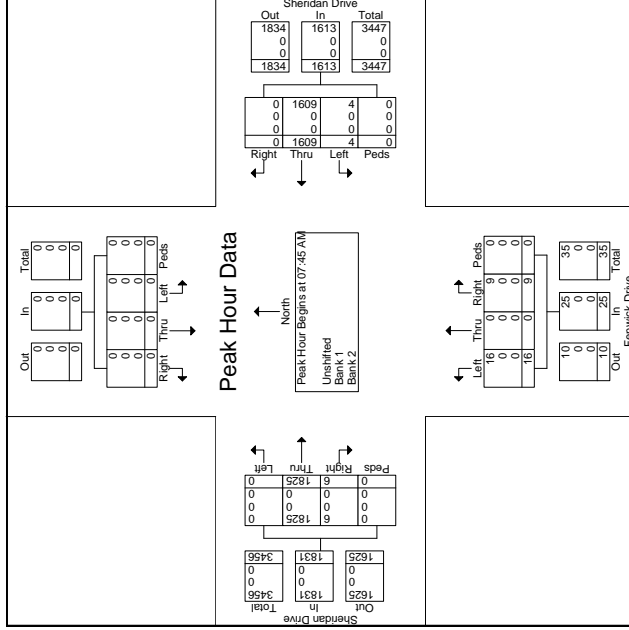
Groups Printed- Unshifted - Bank 1 - Bank 2

Start Time	Southbound			Sheridan Drive Westbound			Fenwick Drive Northbound			Sheridan Drive Eastbound			Int. Total
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Approch %	0	0	0	0	0	0	0	0	0	0	0	0	0
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0
Unshifted	0	0	0	0	0	0	0	0	0	0	0	0	0
% Unshifted	0	0	0	0	0	0	0	0	0	0	0	0	0
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0
Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0



File Name : Sheridan.Fenwick-AM.Peak
 Site Code : 12121212
 Start Date : 9/12/2013
 Page No : 2

Start Time	Southbound			Sheridan Drive Westbound			Fenwick Drive Northbound			Sheridan Drive Eastbound			Int. Total
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Approch %	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total %	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Unshifted	0	0	0	0	0	0	0	0	0	0	0	0	0
% Unshifted	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0
Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000



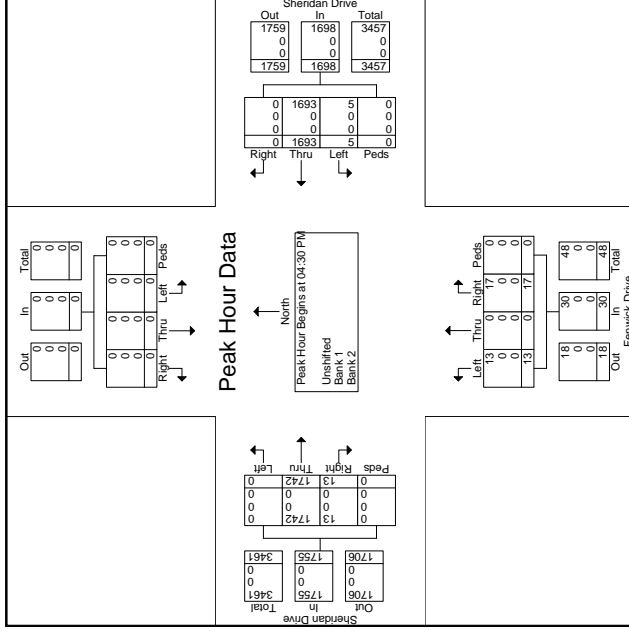


File Name : Sheridan.Fenwick.PM.Peak
 Site Code : 00000000
 Start Date : 9/11/2013
 Page No : 1

Start Time	Southbound			Sheridan Drive Westbound			Fenwick Drive Northbound			Sheridan Drive Eastbound			Int. Total	
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left		
04:00 PM	3	0	0	0	389	1	0	1	0	2	0	0	0	918
04:15 PM	4	0	0	0	400	1	0	2	0	5	0	0	0	896
04:30 PM	0	0	0	0	408	1	0	2	0	5	0	0	0	826
04:45 PM	0	0	0	0	436	1	0	5	0	0	0	0	0	864
Total	7	0	0	0	1633	4	0	13	0	17	0	0	0	3395
05:00 PM	0	0	0	0	449	1	0	4	0	1	0	0	0	881
05:15 PM	0	0	0	0	400	2	0	3	0	3	0	0	0	913
05:30 PM	0	0	0	0	416	3	0	3	0	5	0	0	0	852
05:45 PM	0	0	0	0	392	5	0	4	0	3	0	0	0	832
Total	0	0	0	0	1657	11	0	14	0	12	0	0	0	3478
Grand Total	7	0	0	0	3316	15	0	27	0	24	0	0	0	6873
Approch %	100	0	0	0	99.5	0.5	0	52.9	0	47.1	0	0	0	99.1
Total %	0.1	0	0	0	48.2	0.2	0	0.4	0	0.3	0	0	0	50.3
Unshifted	7	0	0	0	3316	15	0	27	0	24	0	0	0	6873
% Unshifted	100	0	0	0	100	100	0	100	0	100	0	0	0	100
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0

File Name : Sheridan.Fenwick.PM.Peak
 Site Code : 00000000
 Start Date : 9/11/2013
 Page No : 2

Start Time	Southbound			Sheridan Drive Westbound			Fenwick Drive Northbound			Sheridan Drive Eastbound			Int. Total	
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left		
04:00 PM	3	0	0	0	389	1	0	1	0	2	0	0	0	918
04:15 PM	4	0	0	0	400	1	0	2	0	5	0	0	0	896
04:30 PM	0	0	0	0	408	1	0	2	0	5	0	0	0	826
04:45 PM	0	0	0	0	436	1	0	5	0	0	0	0	0	864
Total	7	0	0	0	1633	4	0	13	0	17	0	0	0	3395
05:00 PM	0	0	0	0	449	1	0	4	0	1	0	0	0	881
05:15 PM	0	0	0	0	400	2	0	3	0	3	0	0	0	913
05:30 PM	0	0	0	0	416	3	0	3	0	5	0	0	0	852
05:45 PM	0	0	0	0	392	5	0	4	0	3	0	0	0	832
Total	0	0	0	0	1657	11	0	14	0	12	0	0	0	3478
Grand Total	7	0	0	0	3316	15	0	27	0	24	0	0	0	6873
Approch %	100	0	0	0	99.5	0.5	0	52.9	0	47.1	0	0	0	99.1
Total %	0.1	0	0	0	48.2	0.2	0	0.4	0	0.3	0	0	0	50.3
Unshifted	7	0	0	0	3316	15	0	27	0	24	0	0	0	6873
% Unshifted	100	0	0	0	100	100	0	100	0	100	0	0	0	100
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0





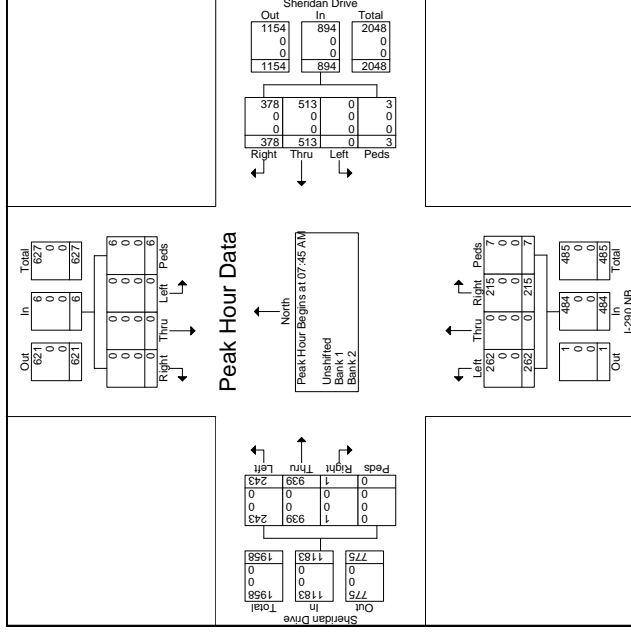
File Name : Sheridan.I290NB-AM.Peak
 Site Code : 22222222
 Start Date : 9/12/2013
 Page No : 1

Start Time	Southbound			Sheridan Drive Westbound			I-290 NB Northbound			Sheridan Drive Eastbound			Int. Total
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	549
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	607
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	677
Total	0	0	0	0	0	0	0	0	0	0	0	0	1820
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	607
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	648
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	635
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	643
Total	0	0	0	0	0	0	0	0	0	0	0	0	2533
09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	620
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	4973
Approch %	0	0	0	0	0	0	0	0	0	0	0	0	0
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0
Unshifted	0	0	0	0	0	0	0	0	0	0	0	0	4973
% Unshifted	0	0	0	0	0	0	0	0	0	0	0	0	100
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0
Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0



File Name : Sheridan.I290NB-AM.Peak
 Site Code : 22222222
 Start Date : 9/12/2013
 Page No : 2

Start Time	Southbound			Sheridan Drive Westbound			I-290 NB Northbound			Sheridan Drive Eastbound			Int. Total
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	677
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	607
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	635
Total	0	0	0	0	0	0	0	0	0	0	0	0	1820
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	607
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	648
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	635
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	643
Total	0	0	0	0	0	0	0	0	0	0	0	0	2533
09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	620
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	4973
Approch %	0	0	0	0	0	0	0	0	0	0	0	0	0
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0
Unshifted	0	0	0	0	0	0	0	0	0	0	0	0	4973
% Unshifted	0	0	0	0	0	0	0	0	0	0	0	0	100
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0
Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0





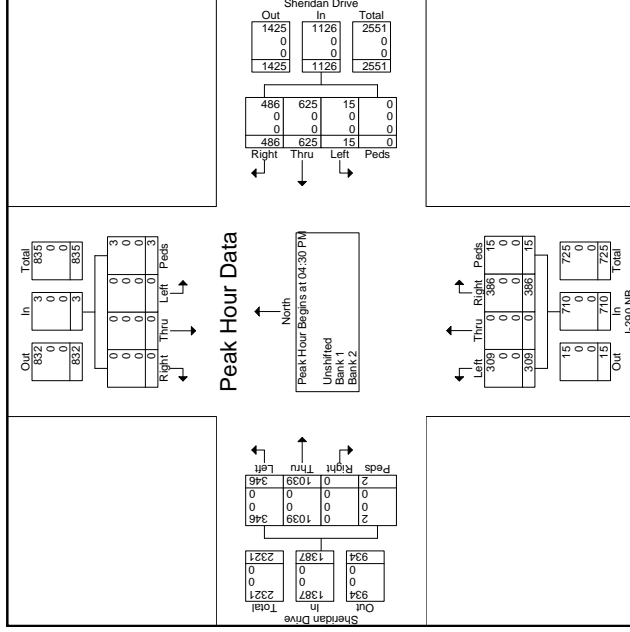
File Name : Sheridan.I290NB.PM.Peak
 Site Code : 11111111
 Start Date : 9/11/2013
 Page No : 1

Start Time	Southbound			Sheridan Drive Westbound			I-290 NB Northbound			Sheridan Drive Eastbound			Int. Total	
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left		
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	3	103	132	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	3	103	132	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	147	151	7	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	147	151	7	0	0	0	0	0	0	0
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	3	250	283	7	0	0	0	0	0	0	0
Approach %	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Unshifted	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0



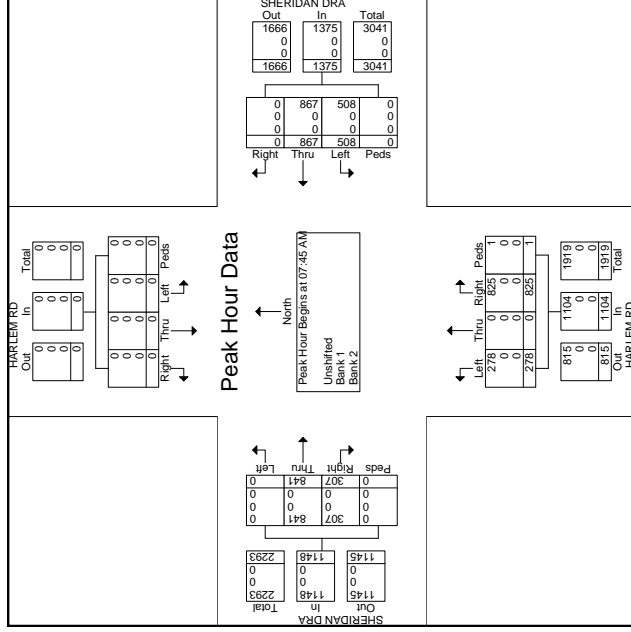
File Name : Sheridan.I290NB.PM.Peak
 Site Code : 11111111
 Start Date : 9/11/2013
 Page No : 2

Start Time	Southbound			Sheridan Drive Westbound			I-290 NB Northbound			Sheridan Drive Eastbound			Int. Total
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	117	185	8	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	117	185	8	0	0	0	0	0	0
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	117	185	8	0	0	0	0	0	0
Approach %	0	0	0	0	0	0	0	0	0	0	0	0	0
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0
% Unshifted	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0



Start Time	HARLEM RD Southbound			SHERIDAN DRA Westbound			HARLEM RD Northbound			SHERIDAN DRA Eastbound			Int. Total
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Approch %	0	0	0	0	0	0	0	0	0	0	0	0	0
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0
Unshifted	0	0	0	0	0	0	0	0	0	0	0	0	0
% Unshifted	0	0	0	0	0	0	0	0	0	0	0	0	0
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0
Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0

Start Time	HARLEM RD Southbound			SHERIDAN DRA Westbound			HARLEM RD Northbound			SHERIDAN DRA Eastbound			Int. Total
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
% Appr. Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
% Unshifted	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
% Bank 1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
% Bank 2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
% Bank 2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00





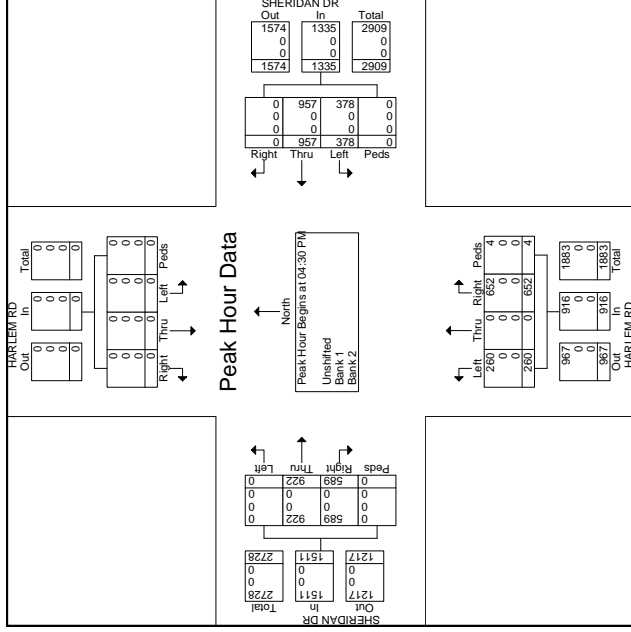
Groups Printed - Unshifted - Bank 1 - Bank 2

Start Time	HARLEM RD Southbound			SHERIDAN DR Westbound			HARLEM RD Northbound			SHERIDAN DR Eastbound			Int. Total	
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left		
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approch %	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unshifted	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Unshifted	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0

File Name : Sheridan.Harlem.PM.Peak
 Site Code : 00000000
 Start Date : 9/11/2013
 Page No : 2



Start Time	HARLEM RD Southbound			SHERIDAN DR Westbound			HARLEM RD Northbound			SHERIDAN DR Eastbound			Int. Total
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Approch %	0	0	0	0	0	0	0	0	0	0	0	0	0
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0
Unshifted	0	0	0	0	0	0	0	0	0	0	0	0	0
% Unshifted	0	0	0	0	0	0	0	0	0	0	0	0	0
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0
Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0





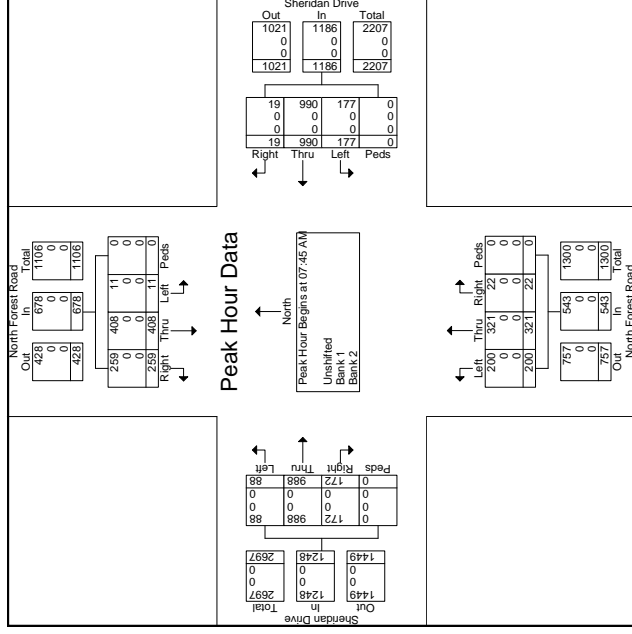
File Name : Sheridan_NForest_AM
 Site Code : 0111111
 Start Date : 2/1/2011
 Page No : 1

Start Time	North Forest Road Southbound						Sheridan Drive Westbound						North Forest Road Northbound						Sheridan Drive Eastbound							
	Right	Thru	Left	Peds	Right	Thru	Right	Thru	Left	Peds	Right	Thru	Right	Thru	Left	Peds	Right	Thru	Right	Thru	Left	Peds	Int. Total			
07:00 AM	38	102	5	0	0	0	131	25	0	0	0	4	16	0	0	0	25	124	28	0	0	0	0	0	0	862
07:15 AM	64	110	2	0	0	0	227	37	0	0	0	54	26	0	0	0	52	224	23	0	0	0	0	0	0	870
07:30 AM	62	94	0	0	0	0	227	37	0	0	0	67	36	0	0	0	40	238	23	0	0	0	0	0	0	818
07:45 AM	54	104	1	0	0	0	270	46	0	0	0	3	73	50	0	0	44	260	17	0	0	0	0	0	0	3117
Total	198	410	9	0	0	0	866	146	0	0	0	10	210	121	0	0	131	905	91	0	0	0	0	0	0	3117
08:00 AM	61	100	5	0	0	0	242	54	0	0	0	3	67	57	0	0	47	255	27	0	0	0	0	0	0	921
08:15 AM	85	111	5	0	0	0	256	42	0	0	0	6	87	46	0	0	44	245	20	0	0	0	0	0	0	952
08:30 AM	59	93	0	0	0	0	222	35	0	0	0	10	94	47	0	0	37	238	24	0	0	0	0	0	0	864
08:45 AM	70	103	10	0	0	0	198	53	0	0	0	9	55	34	0	0	40	226	33	0	0	0	0	0	0	838
Total	275	407	20	0	0	0	918	184	0	0	0	28	303	184	0	0	168	964	104	0	0	0	0	0	0	3575
Grand Total	473	817	29	0	0	0	1784	330	0	0	0	38	513	305	0	0	299	1869	195	0	0	0	0	0	0	6692
Approch %	35.9	61.9	2.2	0	0	0	1.9	82.8	15.3	0	0	4.4	59.9	35.6	0	0	12.7	79.1	8.3	0	0	0	0	0	0	0
Total %	7.1	12.2	0.4	0	0	0	0.6	26.7	4.9	0	0	0.6	7.7	4.6	0	0	4.5	27.9	2.9	0	0	0	0	0	0	0
Unshifted	473	817	29	0	0	0	1784	330	0	0	0	38	513	305	0	0	299	1869	195	0	0	0	0	0	0	6692
% Unshifted	100	100	100	0	0	0	100	100	100	0	0	100	100	100	100	100	100	100	0	0	0	0	0			
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			



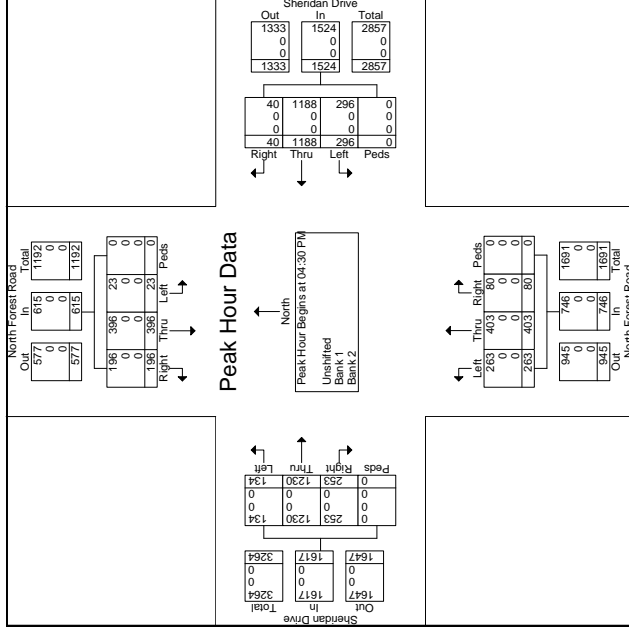
File Name : Sheridan_NForest_AM
 Site Code : 0111111
 Start Date : 2/1/2011
 Page No : 2

Start Time	North Forest Road Southbound						Sheridan Drive Westbound						North Forest Road Northbound						Sheridan Drive Eastbound					
	Right	Thru	Left	Peds	Right	Thru	Right	Thru	Left	Peds	Right	Thru	Right	Thru	Left	Peds	Right	Thru	Right	Thru	Left	Peds	Int. Total	
07:45 AM	54	104	1	0	0	0	159	6	270	46	0	322	3	73	50	0	126	44	250	17	0	311		
08:00 AM	61	100	5	0	0	0	201	5	256	42	0	303	6	87	46	0	139	47	255	27	0	329		
08:15 AM	59	93	0	0	0	0	222	35	0	262	10	94	47	0	0	0	151	37	238	24	0	299		
08:30 AM	70	103	10	0	0	0	198	53	0	1186	22	321	200	0	0	0	543	172	988	58	0			
08:45 AM	70	103	10	0	0	0	198	53	0	1186	22	321	200	0	0	0	543	172	988	58	0			
Total	275	407	20	0	0	0	918	184	0	1166	22	321	200	0	0	0	543	172	988	58	0			
Unshifted	259	408	11	0	0	0	678	19	980	177	0	1166	22	321	200	0	0	543	172	988	58	0		
% Unshifted	94	98	55	0	0	0	73	10	285	14	0	100	100	100	0	0	100	100	100	100	0			
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		



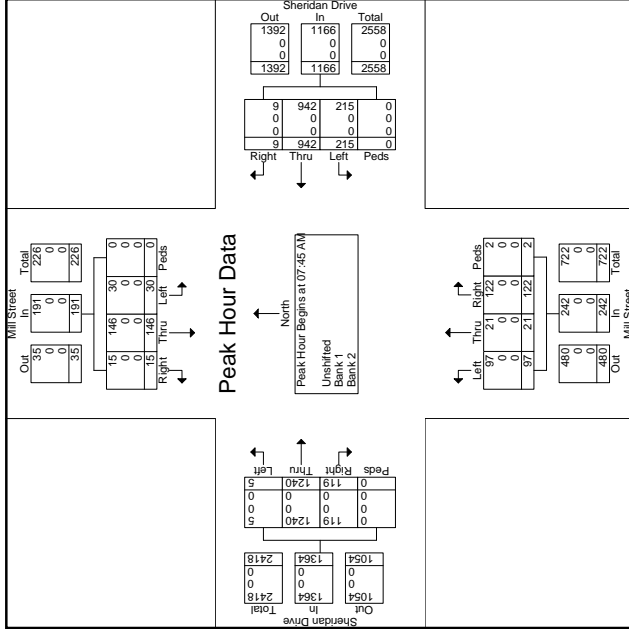
Start Time	North Forest Road Southbound						Sheridan Drive Westbound						North Forest Road Northbound						Sheridan Drive Eastbound					
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
04:00 PM	57	108	3	0	12	280	70	0	25	110	0	0	59	300	32	0	127	0	0	0	0	0	0	0
04:15 PM	57	85	6	0	7	295	78	0	15	82	0	0	53	298	33	0	112	0	0	0	0	0	0	0
04:30 PM	58	84	7	0	8	289	72	0	16	98	0	0	62	296	36	0	1126	0	0	0	0	0	0	0
04:45 PM	40	104	3	0	3	289	72	0	16	98	0	0	59	304	36	0	1109	0	0	0	0	0	0	0
Total	196	396	21	0	33	1188	296	0	80	403	270	0	253	1199	147	0	4482	0	0	0	0	0	0	0
05:00 PM	44	108	10	0	13	315	83	0	27	113	70	0	80	318	32	0	1213	0	0	0	0	0	0	0
05:15 PM	54	90	3	0	12	279	65	0	13	89	55	0	52	312	30	0	1054	0	0	0	0	0	0	0
05:30 PM	57	87	4	0	9	281	90	0	22	102	59	0	58	279	37	0	1085	0	0	0	0	0	0	0
05:45 PM	41	111	8	0	8	313	58	0	18	92	72	0	49	294	36	0	1100	0	0	0	0	0	0	0
Total	196	396	25	0	42	1188	296	0	80	396	256	0	239	1203	135	0	4452	0	0	0	0	0	0	0
Grand Total	392	792	46	0	75	2376	592	0	160	799	526	0	492	2402	282	0	8934	0	0	0	0	0	0	0
Approch %	31.9	64.4	3.7	0	2.5	78.1	19.5	0	10.8	53.8	35.4	0	15.5	75.6	8.9	0	8934	0	0	0	0	0	0	0
Total %	4.4	8.9	0.5	0	0.8	26.6	6.6	0	1.8	8.9	5.9	0	5.5	26.9	3.2	0	8934	0	0	0	0	0	0	0
Unshifted	392	792	46	0	75	2376	592	0	160	799	526	0	492	2402	282	0	8934	0	0	0	0	0	0	0
% Unshifted	100	100	100	0	100	100	100	0	100	100	100	0	100	100	100	0	100	0	0	0	0	0	0	0
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Start Time	North Forest Road Southbound						Sheridan Drive Westbound						North Forest Road Northbound						Sheridan Drive Eastbound					
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
04:00 PM	57	108	3	0	12	280	70	0	25	110	0	0	59	300	32	0	127	0	0	0	0	0	0	0
04:15 PM	57	85	6	0	7	295	78	0	15	82	0	0	53	298	33	0	112	0	0	0	0	0	0	0
04:30 PM	58	84	7	0	8	289	72	0	16	98	0	0	62	296	36	0	1126	0	0	0	0	0	0	0
04:45 PM	40	104	3	0	3	289	72	0	16	98	0	0	59	304	36	0	1109	0	0	0	0	0	0	0
Total	196	396	21	0	33	1188	296	0	80	403	270	0	253	1199	147	0	4482	0	0	0	0	0	0	0
05:00 PM	44	108	10	0	13	315	83	0	27	113	70	0	80	318	32	0	1213	0	0	0	0	0	0	0
05:15 PM	54	90	3	0	12	279	65	0	13	89	55	0	52	312	30	0	1054	0	0	0	0	0	0	0
05:30 PM	57	87	4	0	9	281	90	0	22	102	59	0	58	279	37	0	1085	0	0	0	0	0	0	0
05:45 PM	41	111	8	0	8	313	58	0	18	92	72	0	49	294	36	0	1100	0	0	0	0	0	0	0
Total	196	396	25	0	42	1188	296	0	80	396	256	0	239	1203	135	0	4452	0	0	0	0	0	0	0
Grand Total	392	792	46	0	75	2376	592	0	160	799	526	0	492	2402	282	0	8934	0	0	0	0	0	0	0
Approch %	31.9	64.4	3.7	0	2.5	78.1	19.5	0	10.8	53.8	35.4	0	15.5	75.6	8.9	0	8934	0	0	0	0	0	0	0
Total %	4.4	8.9	0.5	0	0.8	26.6	6.6	0	1.8	8.9	5.9	0	5.5	26.9	3.2	0	8934	0	0	0	0	0	0	0
Unshifted	392	792	46	0	75	2376	592	0	160	799	526	0	492	2402	282	0	8934	0	0	0	0	0	0	0
% Unshifted	100	100	100	0	100	100	100	0	100	100	100	0	100	100	100	0	100	0	0	0	0	0	0	0
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



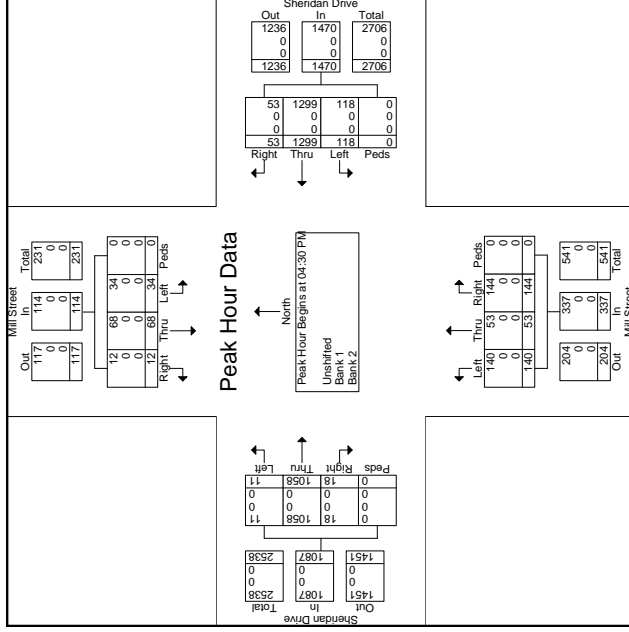
Start Time	Mill Street Southbound			Sheridan Drive Westbound			Mill Street Northbound			Sheridan Drive Eastbound			Int. Total			
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left				
07:00 AM	2	14	3	0	163	37	0	15	0	17	323	2	0	522		
07:15 AM	4	24	9	0	241	76	0	12	0	25	323	0	0	726		
07:30 AM	6	34	7	0	321	51	0	8	0	22	348	0	0	816		
07:45 AM	6	30	11	0	248	53	0	17	0	27	302	0	0	722		
Total	18	102	32	0	933	237	0	87	19	72	911	1178	2	2780		
08:00 AM	3	26	5	0	3	255	71	0	19	5	34	323	2	0	764	
08:15 AM	3	25	4	0	1	228	40	0	26	4	36	357	1	0	747	
08:30 AM	3	65	10	0	1	211	51	0	60	9	22	258	2	0	730	
08:45 AM	4	33	11	0	2	244	31	0	48	11	43	22	324	2	775	
Total	13	149	30	0	7	938	193	0	153	29	119	2	114	1262	7	3016
Grand Total	31	251	62	0	16	1871	430	0	240	48	191	2	205	2440	9	5796
Approch %	9	73	18	0	0.7	80.8	18.6	0	49.9	10	39.7	0.4	7.7	91.9	0.3	0
Total %	0.5	4.3	1.1	0	0.3	32.3	7.4	0	4.1	0.8	3.3	0	3.5	42.1	0.2	0
Unshifted	31	251	62	0	16	1871	430	0	240	48	191	2	205	2440	9	5796
% Unshifted	100	100	100	0	100	100	100	0	100	100	100	100	100	100	100	100
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Start Time	Mill Street Southbound			Sheridan Drive Westbound			Mill Street Northbound			Sheridan Drive Eastbound			Int. Total								
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left									
07:45 AM	6	11	4	3	285	71	0	329	19	5	18	0	42	34	323	2	0	359	764		
08:00 AM	3	26	5	0	32	1	228	40	0	269	26	4	22	0	52	36	357	1	0	394	747
08:15 AM	3	65	10	0	1	211	51	0	263	60	9	36	2	107	22	258	2	0	282	730	
08:45 AM	4	33	11	0	2	244	31	0	50.4	67.7	40.1	0.6	242	119	1240	5	0	1364	2963		
Total	18	149	30	0	7	938	193	0	1166	236	67	2	342	348	259	248	268	225	200	865	3970
Total Volume	15	146	30	0	191	9	942	215	0	1166	122	2	97	2	242	119	1240	5	0	1364	2963
% Approach	7.9	76.4	15.7	0.0	0.8	60.3	16.4	0.0	50.4	67.7	40.1	0.6	242	119	1240	5	0	1364	2963		
% Unshifted	100	100	100	0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



Start Time	Mill Street Southbound			Sheridan Drive Westbound			Mill Street Northbound			Sheridan Drive Eastbound			Int. Total				
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left		Peds			
04:00 PM	1	11	5	1	4	0	0	14	51	0	0	2	282	2	0	692	
04:15 PM	1	13	5	0	26	0	0	14	24	0	0	1	287	4	0	778	
04:30 PM	4	14	9	0	5	377	41	4	5	44	0	1	287	9	0	810	
04:45 PM	0	17	6	0	11	356	31	0	17	14	36	0	319	2	0	3001	
Total	6	55	25	1	26	1277	138	0	112	51	131	0	7	1155	17	0	3001
05:00 PM	3	17	7	0	17	330	33	0	41	18	42	0	11	228	0	747	
05:15 PM	5	20	12	0	20	296	14	0	43	12	22	0	5	224	0	673	
05:30 PM	12	32	49	0	28	259	14	0	27	11	41	0	4	181	5	663	
05:45 PM	19	59	69	0	37	254	20	0	41	14	38	0	6	185	8	750	
Total	39	128	137	0	102	1139	81	0	152	55	143	0	26	818	13	2833	
Grand Total	45	183	162	1	128	2416	219	0	264	106	274	0	33	1973	30	5834	
Approch %	11.5	46.8	41.4	0.3	4.6	87.4	7.9	0	41	16.5	42.5	0	1.6	96.9	1.5	0	
Total %	0.8	3.1	2.8	0	2.2	41.4	3.8	0	4.5	1.8	4.7	0	0.6	33.8	0.5	0	
Unshifted	45	183	162	1	128	2416	219	0	264	106	274	0	33	1973	30	5834	
% Unshifted	100	100	100	100	100	100	100	0	100	100	100	0	100	100	100	100	
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Start Time	Mill Street Southbound			Sheridan Drive Westbound			Mill Street Northbound			Sheridan Drive Eastbound			Int. Total				
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left		Peds			
04:00 PM	1	11	5	1	4	0	0	14	51	0	0	2	282	2	0	692	
04:15 PM	1	13	5	0	26	0	0	14	24	0	0	1	287	4	0	778	
04:30 PM	4	14	9	0	5	377	41	4	5	44	0	1	287	9	0	810	
04:45 PM	0	17	6	0	11	356	31	0	17	14	36	0	319	2	0	3001	
Total	6	55	25	1	26	1277	138	0	112	51	131	0	7	1155	17	0	3001
05:00 PM	3	17	7	0	17	330	33	0	41	18	42	0	11	228	0	747	
05:15 PM	5	20	12	0	20	296	14	0	43	12	22	0	5	224	0	673	
05:30 PM	12	32	49	0	28	259	14	0	27	11	41	0	4	181	5	663	
05:45 PM	19	59	69	0	37	254	20	0	41	14	38	0	6	185	8	750	
Total	39	128	137	0	102	1139	81	0	152	55	143	0	26	818	13	2833	
Grand Total	45	183	162	1	128	2416	219	0	264	106	274	0	33	1973	30	5834	
Approch %	11.5	46.8	41.4	0.3	4.6	87.4	7.9	0	41	16.5	42.5	0	1.6	96.9	1.5	0	
Total %	0.8	3.1	2.8	0	2.2	41.4	3.8	0	4.5	1.8	4.7	0	0.6	33.8	0.5	0	
Unshifted	45	183	162	1	128	2416	219	0	264	106	274	0	33	1973	30	5834	
% Unshifted	100	100	100	100	100	100	100	0	100	100	100	0	100	100	100	100	
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	



A2

**Miscellaneous Traffic Data
and Calculations**

Project Information	
Project Name:	Westwood Mixed Use Neighborhood
No:	33042.1
Date:	3/27/2014
City:	Amherst
State/Province:	NY
Zip/Postal Code:	
Country:	
Client Name:	Ciminelli Real Estate
Analyst's Name:	DLK
Edition:	9th

Land Use	Size	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.		Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	
		Entry	Exit	Entry	Exit
820 - Shopping Center	115 1000 Sq. Feet Gross Leasable Area	105	65	316	342
Reduction		0	0	0	0
Internal		33	16	109	156
Pass-by		0	0	77	68
Non-pass-by		72	49	130	118
220 - Apartment	352 Dwelling Units	35	141	137	74
Reduction		0	0	0	0
Internal		1	4	68	36
Pass-by		0	0	0	0
Non-pass-by		34	137	69	38
224 - Rental Townhouse	93 Dwelling Units	21	44	34	33
Reduction		0	0	0	0
Internal		0	1	17	16
Pass-by		0	0	0	0
Non-pass-by		21	43	17	17
720 - Medical-Dental Office Building	200 1000 Sq. Feet Gross Floor Area	378	100	200	514
Reduction		0	0	0	0
Internal		33	28	15	36
Pass-by		0	0	0	0
Non-pass-by		345	72	185	478
310 - Hotel	85 Occupied Rooms	33	24	29	31
Reduction		0	0	0	0
Internal		0	14	11	5
Pass-by		0	0	0	0
Non-pass-by		33	10	18	26
230 - Residential Condominium/Townhouse	90 Dwelling Units	8	39	37	18
Reduction		0	0	0	0
Internal		0	1	18	10
Pass-by		0	0	0	0
Non-pass-by		8	38	19	8
210 - Single-Family Detached Housing	108 Dwelling Units	21	64	71	42
Reduction		0	0	0	0
Internal		0	2	36	21
Pass-by		0	0	0	0
Non-pass-by		21	62	35	21
210 - Single-Family Detached Housing - 1	46 Dwelling Units	11	31	33	19
Reduction		0	0	0	0
Internal		0	1	16	10
Pass-by		0	0	0	0
Non-pass-by		11	30	17	9
252 - Senior Adult Housing - Attached	96 Dwelling Units	6	13	14	11
Reduction		0	0	0	0
Internal		0	0	0	0
Pass-by		0	0	0	0
Non-pass-by		6	13	14	11
254 - Assisted Living	200 Beds	18	10	19	25
Reduction		0	0	0	0
Internal		0	0	0	0
Pass-by		0	0	0	0
Non-pass-by		18	10	19	25
Total		636	531	890	1109
Total Reduction		0	0	0	0
Total Internal		67	67	290	290
Total Pass-by		0	0	77	68
Total Non-pass-by		569	464	523	751



Proposed Westwood Mixed Use Neighborhood, Town of Amherst, Erie County

Documentation of Ambient Traffic Volume Growth

Estimated from counts
Estimated from counts

Roadway	Segment starts at	Segment end at	2002	2005	2007	2008	2010	2011	2012	2013	Annual Growth
Sheridan Drive	Route 290	North Forest Road	36,260	36,890		36,580		39,724		34,830	1.02%
Maple Road	Millersport Hwy	North Forest Road			25,600		21,913		23,532		-1.67%
North Forest	Maple Road	Sheridan Drive				13,550		11,960	13,680		0.24%

Average -0.14%

**PROPOSED WESTWOOD MIXED USE NEIGHBORHOOD
TOWN OF AMHERST, ERIE COUNTY, NY
AM PEAK**

Num of yrs

10

LOCATION NUMBER	INTERSECTION DESCRIPTION	Existing Volume	Bkgd Volume 0.25%	Hotel				Residential				Commercial				Total Site Trips	Full Build Volumes	
				Enter Dist. %	Exit Dist. %	Trips IN 33	Trips OUT 10	Enter Dist. %	Exit Dist. %	Trips IN 119	Trips OUT 333	Enter Dist. %	Exit Dist. %	Trips IN 417	Trips OUT 121			
1	Maple Road/ Millersport Hwy SB																	
	SR	81	83														83	
	ST	25	26					1%		1			1%		4		5	
	SL	297	305		1%		0		2%		7						7	
	WR WT WL	758	777		1%		0		13%		43			9%		11	54	831
NR NT NL																		
ER ET EL	545 18	559 18		1%		0		13%		15			9%		38		53	612 18
2	Maple Road/ Millersport Hwy NB																	
	SR																	
	ST																	
	SL																	
	WR WT WL	51 912	52 935			2%		0		1% 15%		3 50		1% 9%		1 11	5 61	57 996
NR NT NL	452 1 143	463 1 147		1%		0		2%		2						3	466 1 147	
ER ET EL	529 41	542 42		1%		0		14%		17			10%		42		59	601 42
3	Maple Road/ Maplemere Road																	
	SR	16	16															
	ST	0	0															
	SL	33	34															
	WR WT WL	27 954 12	28 978 12			2%		0		16%		53		10%		12	66	28 1044 12
NR NT NL	16 3 43	16 3 43															16 3 43	
ER ET EL	46 849 20	46 870 21		2%		1		16%		19			10%		42		61	46 931 21
4	Maple Road/ Donna Lea Boulevard																	
	SR																	
	ST																	
	SL																	
	WR WT WL	969 13	993 13			2%		0		16%		53		10%		12	66	1059 13
NR NT NL	61 24	61 24															61 24	
ER ET EL	6 892	6 915		2%		1		16%		19			10%		42		61	6 976
5	Maple Road/ Sandhurst Lane																	
	SR	0	0															
	ST	0	0															
	SL	1	1															
	WR WT WL	2 988 1	2 1013 1						25%		30		20%		83		113	2 1126 1
NR NT NL	3 0 13	3 0 13															3 0 13	
ER ET EL	4 944 1	4 968 1						25%		83		20%		24		107	4 1075 1	
6	Maple Road/ North Forest Road																	
	SR	154	158						5%		6		5%		21		27	185
	ST	346	355										2%		8		8	363
	SL	120	123															123
	WR WT WL	88 733 243	90 752 249						18%		21		15% 1%		63 4		84 4	90 836 253
NR NT NL	179 223 88	184 229 90											1% 2%		1 2	1 2	185 231 92	
ER ET EL	75 769 77	77 788 79						2% 18% 5%		2 60 17		7 60 17		15% 5%		18 78 23	84 866 102	

13	Sheridan Drive/ Harlem Road																
	SR ST SL																
	WR WT WL	777 448	797 459		88%		9		15% 12%		50 40		17% 11%		21 13	71 62	868 521
	NR NT NL	783 278	803 285	2%		1		16%		19		18%		75		95	898
	ER ET EL	307 799	315 819					15%		18		17%		71		89	315 908
14	Harlem Road/ I 290 SB																
	SR ST SL	355 369	364 378		88%		9		6% 6%		20 20		6% 5%		7 6	27 35	391 413
	WR WT WL	664 291	681 298	2%		1		10%		12		12%		50		63	744 298
	NR NT NL	20 435	21 446					6%		7		6%		25		32	21 478
	ER ET EL																
15	Maple Road/ Proposed Driveway																
	SR ST SL																
	WR WT WL	982	1007					25%		30		20%		83		113	1007 113
	NR NT NL				2%		0		25% 16%		83 53		20% 10%		24 12	107 66	107 66
	ER ET EL	953	977	2%		1		16%		19		10%		42		61	61 977
16	Sheridan Drive/ Proposed Ltd Access Dwy																
	SR ST SL								5%		17		5%		6	23	23
	WR WT WL	1467	1504	2% 6%		1 2		4% 18%		5 21		10% 20%		42 83		47 107	47 1611
	NR NT NL																
	ER ET EL	1534	1573		8%		1		5% 22%		6 73		5% 30%		21 36	110 27	1683 27

INTERSECTION ACCIDENT RATE CALCULATIONS

$$\text{Rate per MEV} = \frac{\# \text{ of Accidents} \times 1,000,000}{\text{Total No. of Entering Vehicles}} =$$

$$\text{Rate} = \frac{\# \text{ of Accidents} \times 1,000,000}{\text{Veh./Day} \times \text{Duration of Study}} =$$

Accidents per million entering vehicles (Acc / MEV)

1 Maple Road/Maplemere Road

$$\begin{aligned} \text{ADT} &= \text{Peak hour entering volume} / \text{k factor} \\ \text{ADT} &= 2354 \text{ VPH} / 0.10 = 23540 \text{ VPD} \end{aligned}$$

$$\text{Rate} = \frac{11 \text{ Acc.} \times 1,000,000}{23540 \text{ VPD} \times 365 \text{ Days} \times 3.000 \text{ Yrs.}} = 0.43 \text{ Acc / MEV}$$

2 Maple Road/Sandhurst Lane

$$\begin{aligned} \text{ADT} &= \text{Peak hour entering volume} / \text{k factor} \\ \text{ADT} &= 2260 \text{ VPH} / 0.10 = 22600 \text{ VPD} \end{aligned}$$

$$\text{Rate} = \frac{0 \text{ Acc.} \times 1,000,000}{22600 \text{ VPD} \times 365 \text{ Days} \times 3.000 \text{ Yrs.}} = 0.00 \text{ Acc / MEV}$$

3 Maple Road/Donna Lea Blvd

$$\begin{aligned} \text{ADT} &= \text{Peak hour entering volume} / \text{k factor} \\ \text{ADT} &= 2268 \text{ VPH} / 0.10 = 22680 \text{ VPD} \end{aligned}$$

$$\text{Rate} = \frac{2 \text{ Acc.} \times 1,000,000}{22680 \text{ VPD} \times 365 \text{ Days} \times 3.000 \text{ Yrs.}} = 0.08 \text{ Acc / MEV}$$

4 Maple Road/North Forest Road

$$\begin{aligned} \text{ADT} &= \text{Peak hour entering volume} / \text{k factor} \\ \text{ADT} &= 3599 \text{ VPH} / 0.10 = 35990 \text{ VPD} \end{aligned}$$

$$\text{Rate} = \frac{43 \text{ Acc.} \times 1,000,000}{35990 \text{ VPD} \times 365 \text{ Days} \times 3.000 \text{ Yrs.}} = 1.09 \text{ Acc / MEV}$$

5 North Forest Road/Westwood C.C. Driveway

$$\begin{aligned} \text{ADT} &= \text{Peak hour entering volume} / \text{k factor} \\ \text{ADT} &= 1359 \text{ VPH} / 0.10 = 13590 \text{ VPD} \end{aligned}$$

$$\text{Rate} = \frac{1 \text{ Acc.} \times 1,000,000}{13590 \text{ VPD} \times 365 \text{ Days} \times 3.000 \text{ Yrs.}} = 0.07 \text{ Acc / MEV}$$

6 Harlem Road/I-290 SB Off-/on-ramp

$$\begin{aligned} \text{ADT} &= \text{Peak hour entering volume} / \text{k factor} \\ \text{ADT} &= 2048 \text{ VPH} / 0.10 = 20480 \text{ VPD} \end{aligned}$$

$$\text{Rate} = \frac{5 \text{ Acc.} \times 1,000,000}{20480 \text{ VPD} \times 365 \text{ Days} \times 3.000 \text{ Yrs.}} = 0.22 \text{ Acc / MEV}$$

7 Millersport Hwy NB/Maple Road

$$\begin{aligned} \text{ADT} &= \text{Peak hour entering volume} / \text{k factor} \\ \text{ADT} &= 2482 \text{ VPH} / 0.10 = 24820 \text{ VPD} \end{aligned}$$

$$\text{Rate} = \frac{1 \text{ Acc.} \times 1,000,000}{24820 \text{ VPD} \times 365 \text{ Days} \times 3.000 \text{ Yrs.}} = 0.04 \text{ Acc / MEV}$$

INTERSECTION ACCIDENT RATE CALCULATIONS

8 Millersport Hwy SB/Maple Road

$$\begin{aligned} \text{ADT} &= \text{Peak hour entering volume} / \text{k factor} \\ \text{ADT} &= 2206 \text{ VPH} / 0.10 = 22060 \text{ VPD} \end{aligned}$$

$$\text{Rate} = \frac{0 \text{ Acc.} \times 1,000,000}{22060 \text{ VPD} \times 365 \text{ Days} \times 3.000 \text{ Yrs.}} = 0.00 \text{ Acc / MEV}$$

9 Sheridan Drive/N. Forest Road

$$\begin{aligned} \text{ADT} &= \text{Peak hour entering volume} / \text{k factor} \\ \text{ADT} &= 4584 \text{ VPH} / 0.10 = 45840 \text{ VPD} \end{aligned}$$

$$\text{Rate} = \frac{31 \text{ Acc.} \times 1,000,000}{45840 \text{ VPD} \times 365 \text{ Days} \times 3.000 \text{ Yrs.}} = 0.62 \text{ Acc / MEV}$$

10 Sheridan Drive/Fenwick Road

$$\begin{aligned} \text{ADT} &= \text{Peak hour entering volume} / \text{k factor} \\ \text{ADT} &= 3199 \text{ VPH} / 0.10 = 31990 \text{ VPD} \end{aligned}$$

$$\text{Rate} = \frac{2 \text{ Acc.} \times 1,000,000}{31990 \text{ VPD} \times 365 \text{ Days} \times 3.000 \text{ Yrs.}} = 0.06 \text{ Acc / MEV}$$

11 Sheridan Drive/Frankhauser Road

$$\begin{aligned} \text{ADT} &= \text{Peak hour entering volume} / \text{k factor} \\ \text{ADT} &= 3251 \text{ VPH} / 0.10 = 32510 \text{ VPD} \end{aligned}$$

$$\text{Rate} = \frac{3 \text{ Acc.} \times 1,000,000}{32510 \text{ VPD} \times 365 \text{ Days} \times 3.000 \text{ Yrs.}} = 0.08 \text{ Acc / MEV}$$

12 Sheridan Drive/Harlem Road

$$\begin{aligned} \text{ADT} &= \text{Peak hour entering volume} / \text{k factor} \\ \text{ADT} &= 3758 \text{ VPH} / 0.10 = 37580 \text{ VPD} \end{aligned}$$

$$\text{Rate} = \frac{27 \text{ Acc.} \times 1,000,000}{37580 \text{ VPD} \times 365 \text{ Days} \times 3.000 \text{ Yrs.}} = 0.66 \text{ Acc / MEV}$$

13 Sheridan Drive/I-290 Off-/on-ramp

$$\begin{aligned} \text{ADT} &= \text{Peak hour entering volume} / \text{k factor} \\ \text{ADT} &= 3881 \text{ VPH} / 0.10 = 38810 \text{ VPD} \end{aligned}$$

$$\text{Rate} = \frac{16 \text{ Acc.} \times 1,000,000}{38810 \text{ VPD} \times 365 \text{ Days} \times 3.000 \text{ Yrs.}} = 0.38 \text{ Acc / MEV}$$

14 Sheridan Drive/Mill Street

$$\begin{aligned} \text{ADT} &= \text{Peak hour entering volume} / \text{k factor} \\ \text{ADT} &= 3208 \text{ VPH} / 0.10 = 32080 \text{ VPD} \end{aligned}$$

$$\text{Rate} = \frac{23 \text{ Acc.} \times 1,000,000}{32080 \text{ VPD} \times 365 \text{ Days} \times 3.000 \text{ Yrs.}} = 0.65 \text{ Acc / MEV}$$

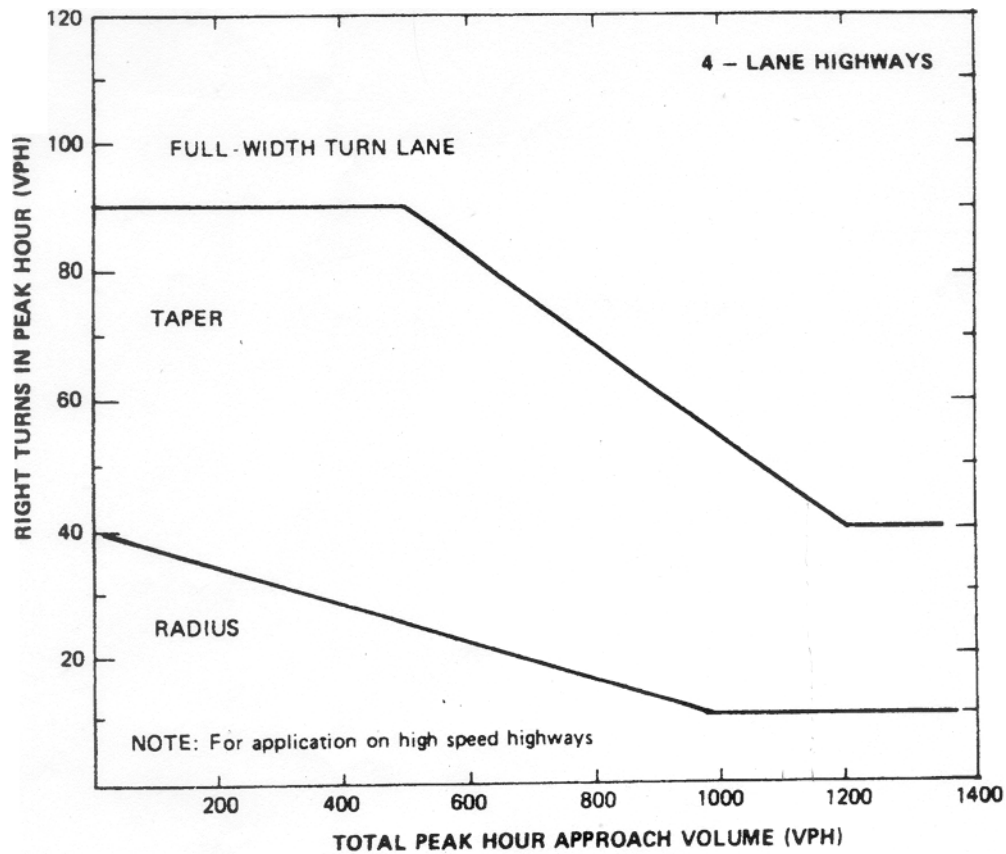
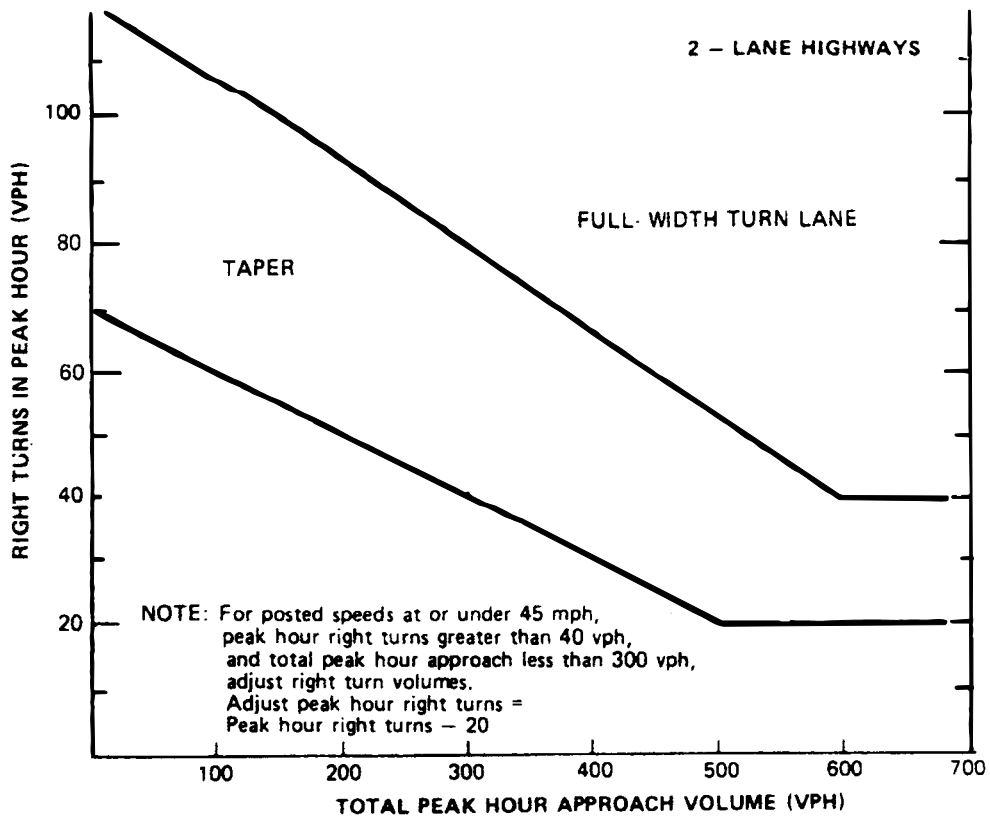


Figure 4-23. Traffic volume guidelines for design of right-turn lanes. (Source: Ref. 4-11)

New York State Department of Transportation Traffic Count Hourly Report

ROAD #: **CR 1920** ROAD NAME: **MAPLE RD** FROM: **MILLERSPORT HY** TO: **N FOREST RD** COUNTY: **Erie**
 DIRECTION: **Eastbound** FACTOR GROUP: **30** REC. SERIAL #: **1564** FUNC. CLASS: **14** TOWN: **AMHERST**
 STATE DIR CODE: **1** WK OF YR: **36** PLACEMENT: **80 YDS W OF DONNA LEA** NHS: **no** LION#: **3326390**
 DATE OF COUNT: **08/30/2010** @ REF MARKER: **JURIS: County** BIN: **3326390**
 NOTES LANE 0: **EB 2 Lanes - 45 MPH** ADDL DATA: **CC Sin: RR CROSSING: HPMS SAMPLE:**
 COUNT TAKEN BY: **ORG CODE: HMM INITIALS: TCV** COUNT TYPE: **VEHICLES** BATCH ID: **DOT-Week 17**

DATE	DAY	AM												PM												DAILY HIGH	DAILY HIGH HOUR		
		12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			12	
30	M																												
31	T																												
1	W																												
2	T	77	32	21	12	32	82	269	765	858	736	715	698	796	771	767	823	844	855	933	610	467	330	269	173	11935	933	18	
3	F	85	31	20	16	14	76	231	665	869	655	739	750	751	763	760	754	842	803	830	765	567	546	358	250	171			

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon) ADT
 81 32 20 14 23 79 250 715 864 696 727 733 780 766 760 832 824 842 849 588 506 344 260 172 11757
 DAYS Counted HOURS Counted WEEKDAYS WEEKDAY Counted Hours AVERAGE WEEKDAY % of day Axle Adj. Factor Seasonal/Weekday Adjustment Factor

2 49 49 2 49 7% 1.000 1.099 ESTIMATED (one way)
AADT 10698

New York State Department of Transportation Traffic Count Hourly Report

ROAD #: CR 1920 **ROAD NAME:** MAPLE RD **FROM:** MILLERSPORT HY **TO:** N FOREST RD **COUNTY:** Erie
DIRECTION: Westbound **FACTOR GROUP:** 30 **REC. SERIAL #:** 1564 **FUNC. CLASS:** 14 **TOWN:** AMHERST
STATE DIR CODE: 2 **WK OF YR:** 36 **PLACEMENT:** 80 YDS W OF DONNA LEA **NHS:** no **LION#:**
DATE OF COUNT: 08/30/2010 **@ REF MARKER:**
NOTES LANE 0: WB 2 Lanes - 45 MPH **ADDL DATA:** **JURIS:** County **BIN:** 3326390
RR CROSSING:
HPMS SAMPLE:

COUNT TAKEN BY: ORG CODE: HMM INITIALS: TCV **CC Sin:** **BATCH ID:** DOT-Week 17

DATE	AM												PM												DAILY HIGH	DAILY HIGH HOUR			
	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11			12		
30 M																													
31 T																													
1 W																													
2 T	69	40	25	31	36	107	268	543	659	590	574	756	802	800	797	900	1066	1067	749	655	646	618	504	504	192	12494	1067	17	
3 F	79	46	30	34	24	110	239	476	617	535	677	770	742	791	789	816	882	1050	1103	825	673	631	503	301	174				

DAYS Counted	HOURS Counted	WEEKDAYS WEEKDAY		AVERAGE WEEKDAY		Axle Adj. Factor	Seasonal/Weekday Adjustment Factor	ADT
		Counted	Hours	High Hour	% of day			
2	49	2	49	1085	9%	1.000	1.099	183 12325
ESTIMATED (one way)								
AADT								
11215								

ROAD #: 1920 **ROAD NAME:** MAPLE RD **FROM:** MILLERSPORT HY **TO:** N FOREST RD **COUNTY:** Erie
STATION: 536168 **STATE DIR CODE:** 2 **PLACEMENT:** 80 YDS W OF DONNA LEA **DATE OF COUNT:** 08/30/2010

New York State Department of Transportation Traffic Count Hourly Report

STATION: 530438

ROUTE #: NY 324 ROAD NAME: FROM: ACC RT 2901 YOUNGMANN EXPY TO: RT 277 N FOREST RD COUNTY: Erie
 DIRECTION: Eastbound REC. SERIAL #: 0023 FUNC. CLASS: 14 TOWN: AMHERST
 STATE DIR CODE: 1 WK OF YR: 39 PLACEMENT: 600' E of Fenwick Rd NHS: no LION#: BRIDGE CROSSING: HPMS SAMPLE:
 DATE OF COUNT: 09/27/2011 @ REF MARKER: JURIS: NYS DOT CC SIn: RR CROSSING: HPMS SAMPLE:
 NOTES LANE 0: Two Lanes EB - 40 MPH ADDL DATA: BATCH ID: DOT-R05CW 40

COUNT TAKEN BY: ORG CODE: TST INITIALS: GNL

DATE	DAY	AM												PM												DAILY HIGH	DAILY HIGH	TOTAL COUNT	DAILY HIGH	DAILY HIGH	TOTAL COUNT	DAILY HIGH	DAILY HIGH
		12 TO	1 TO	2 TO	3 TO	4 TO	5 TO	6 TO	7 TO	8 TO	9 TO	10 TO	11 TO	12 TO	1 TO	2 TO	3 TO	4 TO	5 TO	6 TO	7 TO	8 TO	9 TO	10 TO	11 TO								

DATE	DAY	12 TO	1 TO	2 TO	3 TO	4 TO	5 TO	6 TO	7 TO	8 TO	9 TO	10 TO	11 TO	12 TO	1 TO	2 TO	3 TO	4 TO	5 TO	6 TO	7 TO	8 TO	9 TO	10 TO	11 TO	DAILY HIGH	DAILY HIGH	TOTAL COUNT	DAILY HIGH	DAILY HIGH	TOTAL COUNT	DAILY HIGH	DAILY HIGH				
1	T																																				
2	F																																				
3	S																																				
4	S																																				
5	M																																				
6	T																																				
7	W																																				
8	T																																				
9	F																																				
10	S																																				
11	S																																				
12	M																																				
13	T																																				
14	W																																				
15	T																																				
16	F																																				
17	S																																				
18	S																																				
19	M																																				
20	T																																				
21	W																																				
22	T																																				
23	F																																				
24	S																																				
25	S																																				
26	M																																				
27	T																																				
28	W																																				
29	T	104	60	46	42	28	21	28	32	123	427	1458	2300	1461	1293	1194	1388	1393	1561	1687	1843	2065	1578	1096	737	585	344	208									
28	W	104	60	46	42	28	21	28	32	123	427	1458	2300	1461	1293	1194	1388	1393	1561	1687	1843	2065	1578	1096	737	585	344	208									
28	W	104	60	46	42	28	21	28	32	123	427	1458	2300	1461	1293	1194	1388	1393	1561	1687	1843	2065	1578	1096	737	585	344	208									
29	T	109	60	39	32	41	125	475	1489	2244	1313	1195	1239	1388	1554	1521	1588	1785	1970	1517	1030	811	676	404	267	22872	2244	8									
30	F	125	71	51	50																																

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)												ADT																								
DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY HOURS Counted	AVERAGE High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor	ESTIMATED (one way)		ESTIMATED (one way)																										
110	62	38	37	37	119	441	1450	2191	1432	1203	1225	1362	1409	1484	1616	1769	1968	1509	1036	760	604	384	214	22460	604	384	214	22460	604	384	214	22460	604	384	214	22460
4	70	4	4	70	2191	10%	0.975	0.975	1.068	AADT		21030		AADT		21030		AADT		21030		AADT		21030		AADT		21030		AADT		21030				

ROUTE # NY 324 ROAD NAME: FROM: ACC RT 2901 YOUNGMANN EXPY TO: RT 277 N FOREST RD COUNTY: Erie
 STATION: 530438 STATE DIR CODE: 1 PLACEMENT: 600' E of Fenwick Rd DATE OF COUNT: 09/27/2011

New York State Department of Transportation Traffic Count Count Hourly Report

ROUTE #: NY 324 ROAD NAME: FROM: ACC RT 2901 YOUNGMANN EXPY TO: RT 277 N FOREST RD COUNTY: Erie
 DIRECTION: Westbound REC. SERIAL #: 0023 FUNC. CLASS: 14 TOWN: AMHERST
 STATE DIR CODE: 2 WK OF YR: 39 @ REF MARKER: JURIS: NYS DOT LION#: BIN:
 DATE OF COUNT: 09/27/2011 @ REF MARKER: CC Stn: RR CROSSING:
 NOTES LANE 0: Two Lanes WB - 40 MPH ADDL DATA: BATCH ID: DOT-R05CW 40 HPMS SAMPLE:
 COUNT TAKEN BY: ORG CODE: TST INITIALS: GNL COUNT TYPE: AXLE PAIRS PROCESSED BY: ORG CODE: R05 INITIALS: RPJ

DATE	DAY	AM												PM												DAILY HIGH	DAILY HIGH HOUR		
		12 TO	1 TO	2 TO	3 TO	4 TO	5 TO	6 TO	7 TO	8 TO	9 TO	10 TO	11 TO	12 TO	1 TO	2 TO	3 TO	4 TO	5 TO	6 TO	7 TO	8 TO	9 TO	10 TO	11 TO				
1	T																												
2	F																												
3	S																												
4	S																												
5	M																												
6	T																												
7	W																												
8	T																												
9	F																												
10	S																												
11	S																												
12	M																												
13	T																												
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16	F																												
17	S																												
18	S																												
19	M																												
20	T																												
21	W																												
22	T																												
23	F																												
24	S																												
25	S																												
26	M																												
27	T	35	27	43	87	395	1126	1569	1245	1130	1090	1218	1226	1385	1556	1634	1747	1395	1099	800	646	393	246						
28	W	107	64	36	27	49	106	365	1151	1533	1291	1176	1122	1326	1243	1425	1450	773	716	475	242								
29	T	121	55	39	24	33	102	363	1110	1379	1257	1177	1311	1314	1225	1314	1431	1676	1803	1417	1091	826	714	451	273	20506	1803		
30	F	149	57	39	30																								

DAYS Counted	HOURS Counted	WEEKDAYS WEEKDAY		AVERAGE WEEKDAY		AXLE ADJ.		SEASONAL/WEEKDAY		ADT
		Counted	Hours	High Hour	% of day	Factor	Adjustment Factor	Counted	Hours	
4	70	4	70	1731	9%	0.975	1.068	675	429	19965
ESTIMATED (one way)										
AADT										
18694										

ROUTE # NY 324 ROAD NAME: FROM: ACC RT 2901 YOUNGMANN EXPY TO: RT 277 N FOREST RD COUNTY: Erie
 STATION: 530438 STATE DIR CODE: 2 PLACEMENT: 600' E of Fenwick Rd DATE OF COUNT: 09/27/2011

Traffic Signal Warrant Analysis

Maple Road - Proposed North Site Driveway
Town of Amherst, Erie County

Hour	Existing Fluctuation in Artery Volumes						Full Development Artery Volume on Maple Rd. at North Site Driveway	Hourly Fluctuation of office driveway traffic	Total Hourly Volumes Exiting Proposed Driveway
	per NYSDOT count on Maple Rd.		per NYSDOT count on Maple Rd.		Hourly Fluctuation				
	EB	WB	Two-Way	Two-Way	Two-Way	Two-Way			
7:00 AM to 8:00 AM	715	510	1225	1502	5.59%	1561	0.80%	9	
8:00 AM to 9:00 AM	864	638	1502	1258	6.85%	1914	1.94%	146	
9:00 AM to 10:00 AM	696	562	1258	1353	5.74%	1603	4.00%	46	
10:00 AM to 11:00 AM	727	626	1353	1489	6.17%	1724	5.36%	62	
11:00 AM to 12:00 PM	733	756	1489	1576	6.80%	1898	9.61%	111	
12:00 PM to 1:00 PM	780	796	1576	1560	7.19%	2009	12.27%	142	
1:00 PM to 2:00 PM	766	794	1560	1566	7.12%	1988	6.19%	71	
2:00 PM to 3:00 PM	760	806	1566	1723	7.15%	1996	6.89%	79	
3:00 PM to 4:00 PM	832	891	1723	1882	7.86%	2196	8.27%	95	
4:00 PM to 5:00 PM	824	1058	1882	1927	8.59%	2399	14.25%	164	
5:00 PM to 6:00 PM	842	1085	1927	1636	8.79%	2456	16.73%	193	
6:00 PM to 7:00 PM	849	787	1636	1252	7.47%	2085	6.26%	72	
7:00 PM to 8:00 PM	588	664	1252	1144	5.71%	1596	2.65%	31	
8:00 PM to 9:00 PM	506	638	1144	904	5.22%	1458	1.94%	22	
9:00 PM to 10:00 PM	344	560	904	662	4.13%	1152	1.15%	13	
10:00 PM to 11:00 PM	260	402	662		3.02%	844	0.54%	6	
			21,913			27,929		1,153	

Traffic Signal Warrant Analysis

Sheridan Drive - Proposed South Site Full Access Driveway
Town of Amherst, Erie County

Hour	Existing Fluctuation in Artery Volumes						Full Development Artery Volume on Sheridan Dr. at South Site Full Access Driveway	Hourly Fluctuation of office driveway traffic	Total Hourly Volumes Exiting Proposed Driveway
	per NYSDOT count on Sheridan Dr.		per NYSDOT count on Sheridan Dr.		Hourly Fluctuation				
	EB	WB	Two-Way	Two-Way	Two-Way	Two-Way			
7:00 AM to 8:00 AM	1450	1101	2551	2551	6.42%	2472	0.80%	22	
8:00 AM to 9:00 AM	2191	1457	3648	3648	9.18%	3536	1.94%	228	
9:00 AM to 10:00 AM	1432	1232	2664	2664	6.71%	2582	4.00%	110	
10:00 AM to 11:00 AM	1203	1132	2335	2335	5.88%	2263	5.36%	147	
11:00 AM to 12:00 PM	1225	1145	2370	2370	5.97%	2297	9.61%	264	
12:00 PM to 1:00 PM	1362	1254	2616	2616	6.59%	2535	12.27%	337	
1:00 PM to 2:00 PM	1409	1200	2609	2609	6.57%	2529	6.19%	170	
2:00 PM to 3:00 PM	1484	1341	2825	2825	7.11%	2738	6.89%	189	
3:00 PM to 4:00 PM	1616	1442	3058	3058	7.70%	2964	8.27%	227	
4:00 PM to 5:00 PM	1769	1614	3383	3383	8.52%	3279	14.25%	391	
5:00 PM to 6:00 PM	1968	1731	3699	3699	9.31%	3585	16.73%	459	
6:00 PM to 7:00 PM	1509	1371	2880	2880	7.25%	2791	6.26%	172	
7:00 PM to 8:00 PM	1036	1068	2104	2104	5.30%	2039	2.65%	73	
8:00 PM to 9:00 PM	760	780	1540	1540	3.88%	1493	1.94%	53	
9:00 PM to 10:00 PM	604	675	1279	1279	3.22%	1240	1.15%	31	
10:00 PM to 11:00 PM	384	429	813	813	2.05%	788	0.54%	15	
						38,500		2,743	
						39,724			

Project Information	
Project Name:	Westwood M.U.N. Alt 1
No:	33042
Date:	3/27/2014
City:	Amherst
State/Province:	NY
Zip/Postal Code:	
Country:	
Client Name:	Ciminelli Real Estate
Analyst's Name:	DLK
Edition:	9th

Land Use	Size	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.		Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	
		Entry	Exit	Entry	Exit
252 - Senior Adult Housing - Attached	112 Dwelling Units	7	15	16	13
Reduction		0	0	0	0
Internal		0	0	0	0
Pass-by		0	0	0	0
Non-pass-by		7	15	16	13
252 - Senior Adult Housing - Attached - 1	262 Dwelling Units	18	34	35	30
Reduction		0	0	0	0
Internal		0	0	0	0
Pass-by		0	0	0	0
Non-pass-by		18	34	35	30
254 - Assisted Living	575 Beds	53	28	56	71
Reduction		0	0	0	0
Internal		0	0	0	0
Pass-by		0	0	0	0
Non-pass-by		53	28	56	71
566 - Cemetery	17.5 Acres	2	1	5	10
Reduction		0	0	0	0
Internal		0	0	0	0
Pass-by		0	0	0	0
Non-pass-by		2	1	5	10
252 - Senior Adult Housing - Attached - 2	228 Dwelling Units	15	30	30	26
Reduction		0	0	0	0
Internal		0	0	0	0
Pass-by		0	0	0	0
Non-pass-by		15	30	30	26
Total		95	108	142	150
Total Reduction		0	0	0	0
Total Internal		0	0	0	0
Total Pass-by		0	0	0	0
Total Non-pass-by		95	108	142	150

Project Information	
Project Name:	Westwood M.U.N. Alt 2
No:	33042
Date:	3/27/2014
City:	Amherst
State/Province:	NY
Zip/Postal Code:	
Country:	
Client Name:	Ciminelli Real Estate
Analyst's Name:	DLK
Edition:	9th

Land Use	Size	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.		Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	
		Entry	Exit	Entry	Exit
		210 - Single-Family Detached Housing	372 Dwelling Units	68	202
Reduction		0	0	0	0
Internal		0	0	0	0
Pass-by		0	0	0	0
Non-pass-by		68	202	216	127
Total		68	202	216	127
Total Reduction		0	0	0	0
Total Internal		0	0	0	0
Total Pass-by		0	0	0	0
Total Non-pass-by		68	202	216	127

Project Information	
Project Name:	Westwood M.U.N. Alt 3
No:	33042
Date:	3/27/2014
City:	Amherst
State/Province:	NY
Zip/Postal Code:	
Country:	
Client Name:	Ciminelli Real Estate
Analyst's Name:	DLK
Edition:	9th

Land Use	Size	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.		Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	
		Entry	Exit	Entry	Exit
220 - Apartment	252 Dwelling Units	25	102	101	55
Reduction		0	0	0	0
Internal		1	1	46	23
Pass-by		0	0	0	0
Non-pass-by		24	101	55	32
820 - Shopping Center	433.51 1000 Sq. Feet Gross Leasable Area	236	145	768	833
Reduction		0	0	0	0
Internal		1	1	23	46
Pass-by		0	0	194	204
Non-pass-by		235	144	551	583
9299 - Student Housing	440 Dwelling Units	11	50	125	73
Reduction		0	0	0	0
Internal		0	0	0	0
Pass-by		0	0	0	0
Non-pass-by		11	50	125	73
Total		272	297	994	961
Total Reduction		0	0	0	0
Total Internal		2	2	69	69
Total Pass-by		0	0	194	204
Total Non-pass-by		270	295	731	688

Project Information	
Project Name:	Westwood M.U.N. Alt 4
No:	33042
Date:	4/4/2014
City:	Amherst
State/Province:	NY
Zip/Postal Code:	
Country:	
Client Name:	Ciminelli Real Estate
Analyst's Name:	DLK
Edition:	9th

Land Use	Size	Weekday, A.M. Peak Hour of Generator		Weekday, P.M. Peak Hour of Generator	
		Entry	Exit	Entry	Exit
760 - Research and Development Center	1638.73 1000 Sq. Feet Gross Floor Area	1228	251	202	1142
Reduction		0	0	0	0
Internal		0	0	0	0
Pass-by		0	0	0	0
Non-pass-by		1228	251	202	1142
Total		1228	251	202	1142
Total Reduction		0	0	0	0
Total Internal		0	0	0	0
Total Pass-by		0	0	0	0
Total Non-pass-by		1228	251	202	1142

Project Information	
Project Name:	Westwood M.U.N. Alt 5
No:	33042
Date:	3/27/2014
City:	Amherst
State/Province:	NY
Zip/Postal Code:	
Country:	
Client Name:	Ciminelli Real Estate
Analyst's Name:	DLK
Edition:	9th

Land Use	Size	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.		Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	
		Entry	Exit	Entry	Exit
		720 - Medical-Dental Office Building	200 1000 Sq. Feet Gross Floor Area	378	100
Reduction		0	0	0	0
Internal		33	28	12	15
Pass-by		0	0	0	0
Non-pass-by		345	72	188	499
820 - Shopping Center	150 1000 Sq. Feet Gross Leasable Area	124	76	377	409
Reduction		0	0	0	0
Internal		33	16	109	108
Pass-by		0	0	94	105
Non-pass-by		91	60	174	196
310 - Hotel	85 Occupied Rooms	33	24	29	31
Reduction		0	0	0	0
Internal		0	14	6	5
Pass-by		0	0	0	0
Non-pass-by		33	10	23	26
220 - Apartment	337 Dwelling Units	34	135	132	71
Reduction		0	0	0	0
Internal		1	4	44	36
Pass-by		0	0	0	0
Non-pass-by		33	131	88	35
224 - Rental Townhouse	102 Dwelling Units	23	48	37	36
Reduction		0	0	0	0
Internal		0	1	12	20
Pass-by		0	0	0	0
Non-pass-by		23	47	25	16
210 - Single-Family Detached Housing	108 Dwelling Units	21	64	71	42
Reduction		0	0	0	0
Internal		0	2	23	23
Pass-by		0	0	0	0
Non-pass-by		21	62	48	19
210 - Single-Family Detached Housing - 1	52 Dwelling Units	12	34	37	21
Reduction		0	0	0	0
Internal		0	1	12	12
Pass-by		0	0	0	0
Non-pass-by		12	33	25	9
230 - Residential Condominium/Townhouse	90 Dwelling Units	8	39	37	18
Reduction		0	0	0	0
Internal		0	1	12	11
Pass-by		0	0	0	0
Non-pass-by		8	38	25	7
252 - Senior Adult Housing - Attached	96 Dwelling Units	6	13	14	11
Reduction		0	0	0	0
Internal		0	0	0	0
Pass-by		0	0	0	0
Non-pass-by		6	13	14	11
254 - Assisted Living	200 Beds	18	10	19	25
Reduction		0	0	0	0
Internal		0	0	0	0
Pass-by		0	0	0	0
Non-pass-by		18	10	19	25
Total		657	543	953	1178
Total Reduction		0	0	0	0
Total Internal		67	67	230	230
Total Pass-by		0	0	94	105
Total Non-pass-by		590	476	629	843

**PROPOSED WESTWOOD MIXED USE NEIGHBORHOOD
TOWN OF AMHERST, ERIE COUNTY, NY
AM PEAK**

Num of yrs

LOCATION NUMBER	INTERSECTION DESCRIPTION	Existing Volume	10		Alternative 1				Total Site Trips	Full Build Volumes
			Bkgd Volume	0.25%	Enter Dist. %	Exit Dist. %	Trips IN 95	Trips OUT 108		
1	Maple Road/ Millersport Hwy SB									
	SR	81	83							83
	ST									
	SL	25	26	1%		1		1	1	27
	WR	297	305		2%		2	2	2	307
	WT	758	777		13%		14	14	14	791
	NL									
	ER									
	ET	545	559	13%		12		12	12	571
	EL	18	18							18
2	Maple Road/ Millersport Hwy NB									
	SR									
	ST									
	SL									
	WR	51	52		1%		1	1	1	53
	WT	912	935		15%		16	16	16	951
	NL									
	NR	452	463	2%		2		2	2	465
	NT	1	1							1
	NL	143	147							147
	ER									
	ET	529	542	14%		13		13	13	555
	EL	41	42							42
3	Maple Road/ Maplemere Road									
	SR	16	16							16
	ST	0	0							
	SL	33	34							34
	WR	27	28							28
	WT	954	978		14%		15	15	15	993
	NL									
	NR	16	16							16
	NT	3	3							3
	NL	43	43		2%		2	2	2	45
	ER	46	46							46
	ET	849	870	16%		15		15	15	885
	EL	20	21							21
4	Maple Road/ Donna Lea Boulevard									
	SR									
	ST									
	SL									
	WR									
	WT	969	993		14%		15	15	15	1008
	NL									
	NR	61	61							61
	NT									
	NL	24	24							24
	ER	6	6							6
	ET	892	915	16%		15		15	15	930
	EL									
5	Maple Road/ Sandhurst Lane									
	SR	0	0							
	ST	0	0							
	SL	1	1							1
	WR	2	2							2
	WT	988	1013	21%		20		20	20	1033
	NL									
	NR	3	3							3
	NT	0	0							
	NL	13	13							13
	ER	4	4							4
	ET	944	968	21%		23		23	23	991
	EL	1	1							1
6	Maple Road/ North Forest Road									
	SR	154	158	4%		4		4	4	162
	ST	346	355	1%		1		1	1	356
	SL	120	123							123
	WR	88	90							90
	WT	733	752	17%		16		16	16	768
	NL									
	NR	243	249	1%		1		1	1	250
	NT	179	184		1%		1	1	1	185
	NL	223	229		1%		1	1	1	230
	ER	88	90							90
	ET	75	77							77
	EL	769	788	17%		18		18	18	806
	EL	77	79	4%		4		4	4	83

7	Sheridan Drive/ Mill Street									
	SR	15	15						15	
	ST	146	146						146	
	SL	30	30						30	
	WR	9	9						9	
	WT	942	966	15%		14		14	980	
	WL	215	220						220	
	NR	122	125						125	
	NT	21	21						21	
	NL	97	99	2%		2		2	101	
	ER	119	122		2%		2	2	124	
	ET	1240	1271		15%		16	16	1287	
	EL	5	5						5	
	8	Sheridan Drive/ North Forest Road								
		SR	277	284	2%		2		2	286
ST		426	437						437	
SL		11	11						11	
WR		19	19						19	
WT		990	1015	17%		16		16	1031	
WL		177	181						181	
NR		22	23						23	
NT		332	340						340	
NL		200	205	7%		7		7	212	
ER		192	197		7%		8	8	205	
ET		1254	1286		17%		18	18	1304	
EL		88	90		2%		2	2	92	
9		North Forest Road/ Country Club Driveway								
		SR	5	5						5
	ST	713	731						731	
	SL									
	WR									
	WT									
	WL									
	NR									
	NT	431	442						442	
	NL	8	8						8	
	ER	1	1						1	
	ET									
	EL	1	1						1	
	10	Sheridan Drive/ Fenwick Road								
		SR								
ST										
SL										
WR										
WT		1463	1500		35%		38	38	1538	
WL		4	4						4	
NR		9	9						9	
NT										
NL		16	16						16	
ER		6	6						6	
ET		1525	1564	35%	7%	33	8	41	1605	
EL										
11		Sheridan Drive/ Frankhauser Road								
		SR	29	29		2%		2	2	31
	ST									
	SL	38	38		7%		8	8	46	
	WR	24	24						24	
	WT	1455	1492		35%		38	38	1530	
	WL									
	NR									
	NT									
	NL									
	ER									
	ET	1493	1531	35%		33		33	1564	
	EL	26	26	2%		2		2	28	
	12	Sheridan Drive/ I 290 NB								
		SR								
ST										
SL										
WR		478	490		10%		11	11	501	
WT		963	987		27%		29	29	1016	
WL										
NR		215	220	6%		6		6	226	
NT		0	0							
NL		262	269						269	
ER										
ET		1339	1373	31%		29		29	1402	
EL		243	249						249	

**PROPOSED WESTWOOD MIXED USE NEIGHBORHOOD
TOWN OF AMHERST, ERIE COUNTY, NY
PM PEAK**

Num of yrs

LOCATION NUMBER	INTERSECTION DESCRIPTION	Existing Volume	10		Alternative 1				Total Site Trips	Full Build Volumes
			Bkgd Volume	0.25%	Enter Dist. %	Exit Dist. %	Trips IN	Trips OUT		
							142	150		
1	Maple Road/ Millersport Hwy SB									
	SR	170	174							174
	ST	54	55	1%		1		1	56	
	SL	221	227		2%		3	3	230	
	WR	820	841		13%		20	20	861	
	WL									
	NR									
	NT									
	NL									
	ER	913	936	13%		18		18	954	
	ET	28	29						29	
	EL									
2	Maple Road/ Millersport Hwy NB									
	SR									
	ST									
	SL									
	WR	23	24	1%			2	2	26	
	WL	952	976		15%		23	23	999	
	NR	451	462	2%		3		3	465	
	NT	0	0						91	
	NL	89	91							
	ER	872	894	14%		20		20	914	
	ET	95	97						97	
	EL									
3	Maple Road/ Maplemere Road									
	SR	30	31							31
	ST	8	8							8
	SL	75	77							77
	WR	60	62							62
	WL	868	890	14%			21	21	911	
	NR	21	21						21	
	NT	12	12						12	
	NL	0	0							
	NL	22	22	2%			3	3	25	
	ER	35	35						35	
	ET	1188	1218	16%		23		23	1241	
	EL	35	36						36	
4	Maple Road/ Donna Lea Boulevard									
	SR									
	ST									
	SL									
	WR									
	WL	937	961	14%			21	21	982	
	NR	23	23						23	
	NT	21	21						21	
	NL	12	12						12	
	ER	29	29						29	
	ET	1246	1278	16%		23		23	1301	
	EL									
5	Maple Road/ Sandhurst Lane									
	SR	0	0							
	ST	0	0							
	SL	0	0							
	WR	2	2						2	
	WL	960	984	21%		30		30	1014	
	NR	8	8					8		
	NT	6	6					6		
	NL	0	0							
	NL	10	10						10	
	ER	14	14						14	
	ET	1260	1292	21%			32	32	1324	
	EL	0	0							
6	Maple Road/ North Forest Road									
	SR	116	119	4%		6		6	125	
	ST	375	384	1%		1		1	385	
	SL	165	169						169	
	WR	94	96						96	
	WL	718	736	17%		24		24	760	
	NR	230	236	1%		1		1	237	
	NR	197	202		1%		2	2	204	
	NT	338	347		1%		2	2	349	
	NL	90	92						92	
	ER	139	143						143	
	ET	960	984	17%			26	26	1010	
	EL	177	181	4%			6	6	187	

7	Sheridan Drive/ Mill Street								
	SR	12	12						12
	ST	68	68						68
	SL	34	34						34
	WR	53	53						53
	WT	1299	1332	15%		21		21	1353
	WL	118	121						121
	NR	144	148						148
	NT	53	53						53
	NL	140	144	2%		3		3	147
ER	18	18		2%		3	3	21	
ET	1258	1290		15%		23	23	1313	
EL	11	11						11	
8	Sheridan Drive/ North Forest Road								
	SR	197	202	2%		3		3	205
	ST	482	494						494
	SL	23	24						24
	WR	40	41						41
	WT	1096	1124	17%		24		24	1148
	WL	297	305						305
	NR	80	82						82
	NT	453	464						464
	NL	264	271	7%		10		10	281
ER	254	260		7%		11	11	271	
ET	1227	1258		17%		26	26	1284	
EL	135	138		2%		3	3	141	
9	North Forest Road/ Country Club Driveway								
	SR	13	13						13
	ST	696	714						714
	SL								
	WR								
	WT								
	WL								
	NR								
	NT	608	623						623
	NL	26	26						26
ER	9	9						9	
ET									
EL	7	7						7	
10	Sheridan Drive/ Fenwick Road								
	SR								
	ST								
	SL								
	WR								
	WT	1552	1591		35%		53	53	1644
	WL	5	5						5
	NR	17	17						17
	NT								
	NL	13	13						13
ER	13	13						13	
ET	1599	1639	35%	7%	50	11	60	1699	
EL									
11	Sheridan Drive/ Frankhauser Road								
	SR	40	40		2%		3	3	43
	ST								
	SL	52	52		7%		11	11	63
	WR	41	41						41
	WT	1524	1563		35%		53	53	1616
	WL								
	NR								
	NT								
	NL								
ER	1560	1599	35%		50		50	1649	
ET	34	34	2%		3		3	37	
EL									
12	Sheridan Drive/ I 290 NB								
	SR								
	ST								
	SL								
	WR	586	601		10%		15	15	616
	WT	1026	1052		27%		41	41	1093
	WL								
	NR	386	396	6%		9		9	405
	NT	0	0						
	NL	309	317						317
ER									
ET	1228	1259	31%		44		44	1303	
EL	346	355						355	

**PROPOSED WESTWOOD MIXED USE NEIGHBORHOOD
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AM PEAK**

Num of yrs

LOCATION NUMBER	INTERSECTION DESCRIPTION	Existing Volume	10		Alternative 2				Total Site Trips	Full Build Volumes
			Bkgd Volume	0.25%	Enter Dist. %	Exit Dist. %	Trips IN 68	Trips OUT 202		
1	Maple Road/ Millersport Hwy SB									
	SR	81	83							83
	ST									
	SL	25	26	1%		1		1	1	27
	WR	297	305		2%		4	4	4	309
	WT	758	777		13%		26	26	26	803
	NL									
	ER									
	ET	545	559	13%		9		9	9	568
	EL	18	18							18
2	Maple Road/ Millersport Hwy NB									
	SR									
	ST									
	SL									
	WR	51	52		1%		2	2	2	54
	WT	912	935		15%		30	30	30	965
	NL									
	NR	452	463	2%		1		1	1	464
	NT	1	1							1
	NL	143	147							147
	ER									
	ET	529	542	14%		10		10	10	552
	EL	41	42							42
3	Maple Road/ Maplemere Road									
	SR	16	16							16
	ST	0	0							
	SL	33	34							34
	WR	27	28							28
	WT	954	978		14%		28	28	28	1006
	NL	12	12							12
	NR	16	16							16
	NT	3	3							3
	NL	43	43		2%		4	4	4	47
	ER	46	46							46
	ET	849	870	16%		11		11	11	881
	EL	20	21							21
4	Maple Road/ Donna Lea Boulevard									
	SR									
	ST									
	SL									
	WR									
	WT	969	993		14%		28	28	28	1021
	NL	13	13							13
	NR	61	61							61
	NT									
	NL	24	24							24
	ER	6	6							6
	ET	892	915	16%		11		11	11	926
	EL									
5	Maple Road/ Sandhurst Lane									
	SR	0	0							
	ST	0	0							
	SL	1	1							1
	WR	2	2							2
	WT	988	1013	21%		14		14	14	1027
	NL	1	1							1
	NR	3	3							3
	NT	0	0							
	NL	13	13							13
	ER	4	4							4
	ET	944	968	21%		42		42	42	1010
	EL	1	1							1
6	Maple Road/ North Forest Road									
	SR	154	158	4%		3		3	3	161
	ST	346	355	1%		1		1	1	356
	SL	120	123							123
	WR	88	90							90
	WT	733	752	17%		12		12	12	764
	NL	243	249	1%		1		1	250	
	NR	179	184		1%		2	2	2	186
	NT	223	229		1%		2	2	2	231
	NL	88	90							90
	ER	75	77							77
	ET	769	788	17%		34		34	34	822
	EL	77	79	4%		8		8	8	87

7	Sheridan Drive/ Mill Street								
	SR	15	15						15
	ST	146	146						146
	SL	30	30						30
	WR	9	9						9
	WT	942	966	15%		10		10	976
	WL	215	220						220
	NR	122	125						125
	NT	21	21						21
	NL	97	99	2%		1		1	100
ER	119	122		2%		4	4	126	
ET	1240	1271		15%		30	30	1301	
EL	5	5						5	
8	Sheridan Drive/ North Forest Road								
	SR	277	284						284
	ST	426	437		2%		4	4	441
	SL	11	11		5%		10	10	21
	WR	19	19	1%					20
	WT	990	1015	16%		11		11	1026
	WL	177	181						181
	NR	22	23						23
	NT	332	340						340
	NL	200	205	7%		5		5	210
ER	192	197		5%		10	10	207	
ET	1254	1286		12%		24	24	1310	
EL	88	90						90	
9	North Forest Road/ Country Club Driveway								
	SR	5	0	2%		1		1	1
	ST	713	731						731
	SL								
	WR								
	WT								
	WL								
	NR								
	NT	431	442						442
	NL	8	0	1%		1		1	1
ER	1	0		7%		14	14	14	
ET									
EL	1	0		2%		4	4	4	
10	Sheridan Drive/ Fenwick Road								
	SR				15%		30	30	30
	ST								
	SL				10%		20	20	20
	WR			21%		14		14	14
	WT	1463	1500		2%		4	4	1504
	WL	4	4						4
	NR	9	9						9
	NT								
	NL	16	16						16
ER	6	6						6	
ET	1525	1564	2%	6%	1	12	13	1577	
EL			15%		10		10	10	
11	Sheridan Drive/ Frankhauser Road								
	SR	29	29		20%		40	40	69
	ST								
	SL	38	38		6%		12	12	50
	WR	24	24						24
	WT	1455	1492		17%		34	34	1526
	WL								
	NR								
	NT								
	NL								
ER									
ET	1493	1531	17%		12		12	1543	
EL	26	26	20%		14		14	40	
12	Sheridan Drive/ I 290 NB								
	SR								
	ST								
	SL								
	WR	478	490		10%		20	20	510
	WT	963	987		27%		55	55	1042
	WL								
	NR	215	220	6%		4		4	224
	NT	0	0						
	NL	262	269						269
ER									
ET	1339	1373	31%		21		21	1394	
EL	243	249						249	

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			Bkgd Volume	0.25%	Enter Dist. %	Exit Dist. %	Trips IN 216	Trips OUT 127		
1	Maple Road/ Millersport Hwy SB									
	SR	170	174							174
	ST									
	SL	54	55	1%		2		2		57
	WR	221	227		2%		3	3		230
	WT	820	841		13%		17	17		858
	NL									
	ER									
	ET	913	936	13%		28		28		964
	EL	28	29							29
2	Maple Road/ Millersport Hwy NB									
	SR									
	ST									
	SL									
	WR	23	24		1%		1	1		25
	WT	952	976		15%		19	19		995
	NL									
	NR	451	462	2%		4		4		466
	NT	0	0							
	NL	89	91							91
	ER									
	ET	872	894	14%		30		30		924
	EL	95	97							97
3	Maple Road/ Maplemere Road									
	SR	30	31							31
	ST	8	8							8
	SL	75	77							77
	WR	60	62							62
	WT	868	890		14%		18	18		908
	NL	21	21						21	
	NR	12	12							12
	NT	0	0							
	NL	22	22		2%		3	3		25
	ER	35	35							35
	ET	1188	1218	16%		35		35		1253
	EL	35	36							36
4	Maple Road/ Donna Lea Boulevard									
	SR									
	ST									
	SL									
	WR									
	WT	937	961		14%		18	18		979
	NL	23	23						23	
	NR	21	21							21
	NT									
	NL	12	12							12
	ER	29	29							29
	ET	1246	1278	16%		35		35		1313
	EL									
5	Maple Road/ Sandhurst Lane									
	SR	0	0							
	ST	0	0							
	SL	0	0							
	WR	2	2							2
	WT	960	984	21%		45		45		1029
	NL	8	8						8	
	NR	6	6							6
	NT	0	0							
	NL	10	10							10
	ER	14	14							14
	ET	1260	1292	21%		27		27		1319
	EL	0	0							
6	Maple Road/ North Forest Road									
	SR	116	119	4%		9		9		128
	ST	375	384	1%		2		2		386
	SL	165	169							169
	WR	94	96							96
	WT	718	736	17%		37		37		773
	NL	230	236	1%		2		2	238	
	NR	197	202		1%		1	1		203
	NT	338	347		1%		1	1		348
	NL	90	92							92
	ER	139	143							143
	ET	960	984	17%		22		22		1006
	EL	177	181	4%		5		5		186

7	Sheridan Drive/ Mill Street								
	SR	12	12						12
	ST	68	68						68
	SL	34	34						34
	WR	53	53						53
	WT	1299	1332	15%		32		32	1364
	WL	118	121						121
	NR	144	148						148
	NT	53	53						53
	NL	140	144	2%		4		4	148
ER	18	18		2%		3	3	21	
ET	1258	1290		15%		19	19	1309	
EL	11	11						11	
8	Sheridan Drive/ North Forest Road								
	SR	197	202						202
	ST	482	494		2%		3	3	497
	SL	23	24		5%		6	6	30
	WR	40	41	1%		2		2	43
	WT	1096	1124	16%		35		35	1159
	WL	297	305						305
	NR	80	82						82
	NT	453	464						464
	NL	264	271	7%		15		15	286
ER	254	260		5%		6	6	266	
ET	1227	1258		12%		15	15	1273	
EL	135	138						138	
9	North Forest Road/ Country Club Driveway								
	SR	13	13	2%		4		4	17
	ST	696	714						714
	SL								
	WR								
	WT								
	WL								
	NR								
	NT	608	623						623
	NL	26	26	1%		2		2	28
ER	9	9		7%		9	9	18	
ET									
EL	7	7		2%		3	3	10	
10	Sheridan Drive/ Fenwick Road								
	SR				15%		19	19	19
	ST								
	SL				10%		13	13	13
	WR			21%		45		45	45
	WT	1552	1591		2%		3	3	1594
	WL	5	5						5
	NR	17	17						17
	NT								
	NL	13	13						13
ER	13	13		6%	4	8	12	13	
ET	1599	1639	2%					1651	
EL			15%		32		32	32	
11	Sheridan Drive/ Frankhauser Road								
	SR	40	40		20%		25	25	65
	ST								
	SL	52	52		6%		8	8	60
	WR	41	41						41
	WT	1524	1563		17%		22	22	1585
	WL								
	NR								
	NT								
	NL								
ER	1560	1599	17%		37		37	1636	
ET	34	34	20%		43		43	77	
EL									
12	Sheridan Drive/ I 290 NB								
	SR								
	ST								
	SL								
	WR	586	601		10%		13	13	614
	WT	1026	1052		27%		34	34	1086
	WL								
	NR	386	396	6%		13		13	409
	NT	0	0						
	NL	309	317						317
ER									
ET	1228	1259	31%		67		67	1326	
EL	346	355						355	

**PROPOSED WESTWOOD MIXED USE NEIGHBORHOOD
TOWN OF AMHERST, ERIE COUNTY, NY
AM PEAK**

LOCATION NUMBER	INTERSECTION DESCRIPTION	Existing Volume	Num of yrs		Student Housing				Residential				Commercial				Total Site Trips	Full Build Volumes
			10	0.25%	Enter Dist. %	Exit Dist. %	Trips IN	Trips OUT	Enter Dist. %	Exit Dist. %	Trips IN	Trips OUT	Enter Dist. %	Exit Dist. %	Trips IN	Trips OUT		
							11	50			24	101			235	144		
1	Maple Road/ Millersport Hwy SB																	
	SR	81	83														83	
	ST																	
	SL	25	26	5%		1		1%		0		1%		2		3	29	
	WR	297	305		5%		3		2%		2					5	310	
WT	758	777		58%		29		13%		13		9%		13	55	832		
WL																		
NR																		
NT																		
NL																		
ER																		
ET	545	559	68%		7		13%		3		9%		21		32	591		
EL	18	18														18		
2	Maple Road/ Millersport Hwy NB																	
	SR																	
	ST																	
	SL																	
	WR	51	52		15%		8		1%		1		1%		1	10	62	
WT	912	935		63%		32		15%		15		9%		13	60	995		
WL																		
NR	452	463	5%		1		2%		0						1	464		
NT	1	1														1		
NL	143	147														147		
ER																		
ET	529	542	73%		8		14%		3		10%		24		35	577		
EL	41	42														42		
3	Maple Road/ Maplemere Road																	
	SR	16	16														16	
	ST	0	0															
	SL	33	34														34	
	WR	27	28														28	
WT	954	978		78%		39		16%		16		10%		14	70	1048		
WL	12	12														12		
NR	16	16														16		
NT	3	3														3		
NL	43	43														43		
ER	46	46														46		
ET	849	870	78%		9		16%		4		10%		24		36	906		
EL	20	21														21		
4	Maple Road/ Donna Lea Boulevard																	
	SR																	
	ST																	
	SL																	
	WR																	
WT	969	993		78%		39		16%		16		10%		14	70	1063		
WL	13	13														13		
NR	61	61														61		
NT																		
NL	24	24														24		
ER	6	6														6		
ET	892	915	78%		9		16%		4		10%		24		36	951		
EL																		
5	Maple Road/ Sandhurst Lane																	
	SR	0	0															
	ST	0	0															
	SL	1	1														1	
	WR	2	2														2	
WT	988	1013	2%		0		23%		6		20%		47		53	1066		
WL	1	1														1		
NR	3	3														3		
NT	0	0																
NL	13	13														13		
ER	4	4														4		
ET	944	968		2%		1		23%		23		20%		29	53	1021		
EL	1	1														1		
6	Maple Road/ North Forest Road																	
	SR	154	158					5%		1		5%		12	13	171		
	ST	346	355									2%		5	5	360		
	SL	120	123													123		
	WR	88	90													90		
WT	733	752	2%		0		18%		4		15%		35	40	792			
WL	243	249									1%		2	2	251			
NR	179	184														185		
NT	223	229										1%		1	1	232		
NL	88	90									2%		3	3	90			
ER	75	77														77		
ET	769	788		2%		1		18%		18		15%		22	41	829		
EL	77	79						5%		5		5%		7	12	91		

14	Harlem Road/ I 290 SB																
	SR	355	364														
	ST	369	378						6%		6		6%		9	15	379
	SL								6%		6		5%		7	13	391
	WR	664	681					10%		2		12%		28		31	712
	WT																
WL	291	298														298	
NR	20	21														21	
NT	435	446					6%		1		6%		14		16	462	
NL																	
ER																	
ET																	
EL																	
15	Maple Road/ Proposed Driveway																
	SR																
	ST																
	SL																
	WR	982	1007	2%		0	23%		6		20%		47		53	1007	
	WT															53	
WL				2%	0	1	23%	23%	6	23	20%	20%	47	29	53	53	
NR				78%		39		16%		16		10%		14	70	70	
NT																	
NL																	
ER	953	977	78%		9	16%		16%	4	16	10%	10%	24	14	36	36	
ET																977	
EL																	
16	Sheridan Drive/ Proposed Ltd Access Dwy																
	SR											10%		14	14	14	
	ST																
	SL											5%		7	7	7	
	WR	1467	1504	1%		0	2%		0		15%		35		36	36	
	WT			1%		0	10%		2		10%		24		26	1530	
WL																	
NR																	
NT																	
NL																	
ER	1534	1573		2%		1		12%		12		12%	12	17	30	1603	
ET															12	12	
EL																	
17	Frankhauser Road/ Proposed Access Dwy																
	SR																
	ST	67	69														69
	SL																
	WR																
	WT																
WL								5%		5	15%	15%	24	22	27	27	
NR	50	51					5%		1		10%		24		25	25	
NT																51	
NL																	
ER																	
ET																	
EL																	
18	Sheridan Drive/ Proposed Access Dwy																
	SR				18%		9			32		20%		29	70	70	
	ST																
	SL				1%		1		12%	12		7%		10	23	23	
	WR	1467	1504	1%		0	10%			2		10%	10%	24	14	26	26
	WT														14	14	1518
WL																	
NR																	
NT																	
NL																	
ER	1534	1573															
ET																	
EL			18%		2		32%		8		5%	5%	12	7	19	1592	
											25%		59	68	68	68	

14	Harlem Road/ I 290 SB																	
	SR	470	482					6%		2		6%		35	1	38	520	
	ST	462	474					6%		2		5%		29		31	505	
	WR	338	347				10%		6		12%		66			72	419	
	WT	228	234														234	
	WL	11	11					6%		3		6%		33		36	11	589
	NR	539	553															
	NT																	
	NL																	
	ER																	
	ET																	
	EL																	
15	Maple Road/ Proposed Driveway																	
	SR																	
	ST																	
	SL																	
	WR	960	984	2%		3		23%		13		20%		110		-8	-8	976
	WT														8	8	133	133
WL																		
	NR			2%		1		23%		7		20%		117	12	137	137	
	NT																	
	NL			78%	78%	98	57	16%	16%	5		10%	58	8	128	128	128	
	ER	1267	1299	78%		98		16%		9		10%		55	12	173	173	
	ET														-12	-12	1287	
	EL																	
16	Sheridan Drive/ Proposed Ltd Access Dwy																	
	SR											10%		58	22	80	80	
	ST											5%		29	29	58	58	
	SL																	
	WR	1557	1596	1%		1		2%		1		15%		83	50	135	135	
	WT			1%		1		10%		6		10%		55	-50	12	1608	
WL																		
	NR																	
	NT																	
	NL																	
	ER	1616	1657		2%		1		12%		4		12%		70	-23	52	1709
	ET														12	40	40	
	EL											5%		28				
17	Frankhauser Road/ Proposed Access Dwy																	
	SR	92	92															
	ST																	
	SL																	
	WR																	
	WT																	
WL																		
	NR							5%		3		10%		55	87	21	140	
	NT	75	75													79	79	
	NL															75	75	
	ER																	
	ET																	
	EL																	
18	Sheridan Drive/ Proposed Access Dwy																	
	SR				18%		13		32%		10		20%		117	45	185	185
	ST																	
	SL				1%		1		12%		4		7%		37	82	82	
	WR	1557	1596	1%		1		10%		6		10%		55	41	35	97	97
	WT																	
WL																		
	NR																	
	NT																	
	NL																	
	ER	1616	1657		18%		23		32%			5%	5%	28	29	-48	9	1666
	ET																	
	EL									18		25%		138	56	234	234	

**PROPOSED WESTWOOD MIXED USE NEIGHBORHOOD
TOWN OF AMHERST, ERIE COUNTY, NY
AM PEAK**

Num of yrs

10

LOCATION NUMBER	INTERSECTION DESCRIPTION	Existing Volume	Bkgd Volume 0.25%	Alternative 4				Total Site Trips	Full Build Volumes
				Enter Dist. %	Exit Dist. %	Trips IN 1228	Trips OUT 251		
1	Maple Road/ Millersport Hwy SB								
	SR	81	83					83	
	ST								
	SL	25	26	2%		25		51	
	WR	297	305					305	
	WT	758	777		13%		33	810	
	WL								
	NR								
	NT								
	NL								
	ER	545	559	13%		160		719	
	ET	18	18					18	
	EL								
2	Maple Road/ Millersport Hwy NB								
	SR								
	ST								
	SL								
	WR	51	52		2%		5	57	
	WT	912	935		13%		33	968	
	WL								
	NR	452	463					463	
	NT	1	1					1	
	NL	143	147					147	
	ER	529	542	15%		184		726	
	ET	41	42					42	
	EL								
3	Maple Road/ Maplemere Road								
	SR	16	16					16	
	ST	0	0						
	SL	33	34					34	
	WR	27	28					28	
	WT	954	978		15%		38	1016	
	WL	12	12					12	
	NR	16	16					16	
	NT	3	3					3	
	NL	43	43					43	
	ER	46	46					46	
	ET	849	870	15%		184		1054	
	EL	20	21					21	
4	Maple Road/ Donna Lea Boulevard								
	SR								
	ST								
	SL								
	WR	969	993		15%		38	1031	
	WT	13	13					13	
	WL	61	61					61	
	NR	24	24					24	
	NT	6	6					6	
	NL	892	915	15%		184		1099	
	ER								
	ET								
	EL								
5	Maple Road/ Sandhurst Lane								
	SR	0	0						
	ST	0	0						
	SL	1	1					1	
	WR	2	2					2	
	WT	988	1013	20%		246		1259	
	WL	1	1					1	
	NR	3	3					3	
	NT	0	0						
	NL	13	13					13	
	ER	4	4					4	
	ET	944	968	20%		50		1018	
	EL	1	1					1	
6	Maple Road/ North Forest Road								
	SR	154	158	5%		61		219	
	ST	346	355	2%		25		380	
	SL	120	123					123	
	WR	88	90					90	
	WT	733	752	15%		184		936	
	WL	243	249	1%		12		261	
	NR	179	184		1%		3	187	
	NT	223	229		2%		5	234	
	NL	88	90					90	
	ER	75	77					77	
	ET	769	788	15%		38		826	
	EL	77	79	5%		13		92	

7	Sheridan Drive/ Mill Street								
	SR	15	15	1%		12		12	27
	ST	146	146						146
	SL	30	30						30
	WR	9	9						9
	WT	942	966	18%		221		221	1187
	WL	215	220						220
	NR	122	125						125
	NT	21	21						21
	NL	97	99	1%		12		12	111
	ER	119	122		1%		3	3	125
	ET	1240	1271		18%		45	45	1316
	EL	5	5		1%		3	3	8
	8	Sheridan Drive/ North Forest Road							
SR		277	284						284
ST		426	437		4%		10	10	447
SL		11	11		12%		30	30	41
WR		19	19	1%		12		12	31
WT		990	1015	19%		233		233	1248
WL		177	181						181
NR		22	23						23
NT		332	340	1%		12		12	352
NL		200	205	6%		74		74	279
ER		192	197		3%		8	8	205
ET		1254	1286		8%		20	20	1306
EL		88	90						90
9		North Forest Road/ Country Club Driveway							
	SR	5	0	3%		37		37	37
	ST	713	731						731
	SL								
	WR								
	WT								
	WL								
	NR								
	NT	431	442						442
	NL	8	0	2%		25		25	25
	ER	1	0		16%		40	40	40
	ET								
	EL	1	0		3%		8	8	8
	10	Sheridan Drive/ Fenwick Road							
SR					20%		50	50	50
ST									
SL					3%		8	8	8
WR				10%		123		123	123
WT		1463	1500		5%		13	13	1513
WL		4	4						4
NR		9	9						9
NT									
NL		16	16						16
ER		6	6						6
ET		1525	1564	5%	5%	61	13	74	1638
EL				20%		246		246	246
11		Sheridan Drive/ Frankhauser Road							
	SR	29	29		10%		25	25	54
	ST								
	SL	38	38		5%		13	13	51
	WR	24	24						24
	WT	1455	1492		25%		63	63	1555
	WL								
	NR								
	NT								
	NL								
	ER								
	ET	1493	1531	25%		307		307	1838
	EL	26	26	10%		123		123	149
	12	Sheridan Drive/ I 290 NB							
SR									
ST									
SL									
WR		478	490		10%		25	25	515
WT		963	987		25%		63	63	1050
WL									
NR		215	220	5%		61		61	281
NT		0	0						
NL		262	269						269
ER									
ET		1339	1373	30%		368		368	1741
EL		243	249						249

**PROPOSED WESTWOOD MIXED USE NEIGHBORHOOD
TOWN OF AMHERST, ERIE COUNTY, NY
PM PEAK**

Num of yrs

LOCATION NUMBER	INTERSECTION DESCRIPTION	Existing Volume	10		Alternative 4				Total Site Trips	Full Build Volumes
			Bkgd Volume	0.25%	Enter Dist. %	Exit Dist. %	Trips IN 202	Trips OUT 1142		
1	Maple Road/ Millersport Hwy SB									
	SR	170	174							174
	ST	54	55	2%		4		4		59
	SL	221	227							227
	WR	820	841		13%		148	148		989
	WL									
	NR									
	NT									
	NL									
	ER	913	936	13%		26		26		962
	ET	28	29							29
	EL									
2	Maple Road/ Millersport Hwy NB									
	SR									
	ST									
	SL									
	WR	23	24	2%			23	23		47
	WL	952	976		13%		148	148		1124
	NR	451	462							462
	NT	0	0							
	NL	89	91							91
	ER	872	894	15%		30		30		924
	ET	95	97							97
	EL									
3	Maple Road/ Maplemere Road									
	SR	30	31							31
	ST	8	8							8
	SL	75	77							77
	WR	60	62							62
	WL	868	890	15%			171	171		1061
	NR	21	21							21
	NT	12	12							12
	NL	0	0							
	NL	22	22							22
	ER	35	35	15%		30		30		35
	ET	1188	1218							1248
	EL	35	36							36
4	Maple Road/ Donna Lea Boulevard									
	SR									
	ST									
	SL									
	WR									
	WL	937	961	15%			171	171		1132
	NR	23	23							23
	NT	21	21							21
	NL	12	12							12
	ER	29	29							29
	ET	1246	1278	15%		30		30		1308
	EL									
5	Maple Road/ Sandhurst Lane									
	SR	0	0							
	ST	0	0							
	SL	0	0							
	WR	2	2							2
	WL	960	984	20%		40		40		1024
	NR	8	8							8
	NT	6	6							6
	NL	0	0							
	NL	10	10							10
	ER	14	14							14
	ET	1260	1292	20%			228	228		1520
	EL	0	0							
6	Maple Road/ North Forest Road									
	SR	116	119	5%		10		10		129
	ST	375	384	2%		4		4		388
	SL	165	169							169
	WR	94	96							96
	WL	718	736	15%		30		30		766
	NR	230	236	1%		2		2		238
	NT	197	202		1%		11	11		213
	NL	338	347		2%		23	23		370
	NL	90	92							92
	ER	139	143							143
	ET	960	984	15%			171	171		1155
	EL	177	181	5%			57	57		238

7	Sheridan Drive/ Mill Street								
	SR	12	12	1%		2		2	14
	ST	68	68						68
	SL	34	34						34
	WR	53	53						53
	WT	1299	1332	18%		36		36	1368
	WL	118	121						121
	NR	144	148						148
	NT	53	53						53
	NL	140	144	1%		2		2	146
ER	18	18		1%		11	11	29	
ET	1258	1290		18%		206	206	1496	
EL	11	11		1%		11	11	22	
8	Sheridan Drive/ North Forest Road								
	SR	197	202						202
	ST	482	494		4%		46	46	540
	SL	23	24		12%		137	137	161
	WR	40	41	1%		2		2	43
	WT	1096	1124	19%		38		38	1162
	WL	297	305						305
	NR	80	82						82
	NT	453	464	1%		2		2	466
	NL	264	271	6%		12		12	283
ER	254	260		3%		34	34	294	
ET	1227	1258		8%		91	91	1349	
EL	135	138						138	
9	North Forest Road/ Country Club Driveway								
	SR	13	13	3%		6		6	19
	ST	696	714						714
	SL								
	WR								
	WT								
	WL								
	NR	608	623						623
	NT	26	26	2%		4		4	30
	NL								
ER	9	9		16%		183	183	192	
ET									
EL	7	7		3%		34	34	41	
10	Sheridan Drive/ Fenwick Road								
	SR				20%		228	228	228
	ST								
	SL				3%		34	34	34
	WR			10%		20		20	20
	WT	1552	1591		5%		57	57	1648
	WL	5	5						5
	NR	17	17						17
	NT								
	NL	13	13						13
ER	13	13						13	
ET	1599	1639	5%	5%	10	57	67	1706	
EL			20%		40		40	40	
11	Sheridan Drive/ Frankhauser Road								
	SR	40	40		10%		114	114	154
	ST								
	SL	52	52		5%		57	57	109
	WR	41	41						41
	WT	1524	1563		25%		286	286	1849
	WL								
	NR								
	NT								
	NL								
ER	1560	1599	25%		51		51	1650	
ET	34	34	10%		20		20	54	
EL									
12	Sheridan Drive/ I 290 NB								
	SR								
	ST								
	SL								
	WR	586	601		10%		114	114	715
	WT	1026	1052		25%		286	286	1338
	WL								
	NR	386	396	5%		10		10	406
	NT	0	0						
	NL	309	317						317
ER									
ET	1228	1259	30%		61		61	1320	
EL	346	355						355	

**PROPOSED WESTWOOD MIXED USE NEIGHBORHOOD
TOWN OF AMHERST, ERIE COUNTY, NY
AM PEAK**

LOCATION NUMBER	INTERSECTION DESCRIPTION	Existing Volume	Num of yrs		Hotel				Residential				Commercial				Total Site Trips	Full Build Volumes
			10	10	Enter Dist. %	Exit Dist. %	Trips IN	Trips OUT	Enter Dist. %	Exit Dist. %	Trips IN	Trips OUT	Enter Dist. %	Exit Dist. %	Trips IN	Trips OUT		
			0.25%	0.25%	33	10	121	334	436	132								
1	Maple Road/ Millersport Hwy SB																	
	SR	81	83														83	
	ST																	
	SL	25	26					1%		1		1%		4		6	32	
	WR	297	305		1%		0		2%		7				7	312		
WT	758	777		1%		0		13%		43		9%		12	55	832		
WL																		
NR																		
NT																		
NL																		
ER																		
ET	545	559	1%		0		13%			16		9%		39	55	614		
EL	18	18														18		
2	Maple Road/ Millersport Hwy NB																	
	SR																	
	ST																	
	SL																	
	WR	51	52						1%		3		1%		1	5	57	
WT	912	935		2%		0		15%		50		9%		12	62	997		
WL																		
NR	452	463	1%		0		2%			2					3	466		
NT	1	1														1		
NL	143	147														147		
ER																		
ET	529	542	1%		0		14%			17		10%		44	61	603		
EL	41	42														42		
3	Maple Road/ Maplemere Road																	
	SR	16	16														16	
	ST	0	0															
	SL	33	34														34	
	WR	27	28														28	
WT	954	978		2%		0		16%		53		10%		13	67	1045		
WL	12	12														12		
NR	16	16														16		
NT	3	3														3		
NL	43	43														43		
ER	46	46														46		
ET	849	870	2%		1		16%			19		10%		44	64	934		
EL	20	21														21		
4	Maple Road/ Donna Lea Boulevard																	
	SR																	
	ST																	
	SL																	
	WR																	
WT	969	993		2%		0		16%		53		10%		13	67	1060		
WL	13	13														13		
NR	61	61														61		
NT																		
NL	24	24														24		
ER	6	6														6		
ET	892	915	2%		1		16%			19		10%		44	64	979		
EL																		
5	Maple Road/ Sandhurst Lane																	
	SR	0	0															
	ST	0	0															
	SL	1	1														1	
	WR	2	2														2	
WT	988	1013					22%		27		20%		87	114	1127			
WL	1	1													1			
NR	3	3														3		
NT	0	0																
NL	13	13														13		
ER	4	4														4		
ET	944	968						22%		73		20%		26	100	1068		
EL	1	1														1		
6	Maple Road/ North Forest Road																	
	SR	154	158					5%		6		5%		22	28	186		
	ST	346	355									2%		9	9	364		
	SL	120	123													123		
	WR	88	90													90		
WT	733	752					17%		21		15%		65	86	838			
WL	243	249					1%		1		1%		4	6	255			
NR	179	184						1%		3				5	189			
NT	223	229										2%		3	3	232		
NL	88	90														90		
ER	75	77														77		
ET	769	788						17%		57		15%		20	77	865		
EL	77	79						5%		17		5%		7	23	102		

7	Sheridan Drive/ Mill Street																	
	SR	12	12								1%		4				4	16
	ST	68	68														68	68
	SL	34	34														34	34
	WR	53	53														53	53
	WT	1299	1332	2%		0		15%		33		18%		65			98	1430
	WL	118	121														118	121
	NR	144	148														144	148
	NT	53	53														53	53
	NL	140	144					2%		4		1%		4			8	152
	ER	18	18						2%		2		1%		7		9	27
ET	1258	1290		2%		1		15%		18		18%		125	3	147	1437	
EL	11	11										1%		7		7	18	
8	Sheridan Drive/ North Forest Road																	
	SR	197	202														197	202
	ST	482	494		1%		0			4				14			18	512
	SL	23	24		1%		0			11			8%				67	91
	WR	40	41					2%		4		1%		4			8	49
	WT	1096	1124	2%		0		15%		33		19%		69			102	1226
	WL	297	305														297	305
	NR	80	82														80	82
	NT	453	464					1%		2		1%		4			6	470
	NL	264	271	6%		1		6%		13		6%		22			36	307
	ER	254	260		5%		1		4%		5		5%		35	2	43	303
ET	1227	1258		1%		0		8%		10		12%		83	3	96	1354	
EL	135	138														135	138	
9	North Forest Road/ Country Club Driveway																	
	SR	13	13					1%		2				11			13	26
	ST	696	714														696	714
	SL																	
	WR																	
	WT																	
	WL																	
	NR																	
	NT	608	623														608	623
	NL	26	26					3%		7		2%		7			14	40
	ER	9	9		2%		1		12%		15		10%		70		85	94
ET																		
EL	7	7						1%		1		3%		21		22	29	
10	Sheridan Drive/ Fenwick Road																	
	SR				88%		23			33		20%		139	23		218	218
	ST																	
	SL				6%		2			15		7%		49	18		83	83
	WR			6%		1		19%		42		10%		36	17		96	96
	WT	1552	1591						5%	6		10%		70	-29		47	1638
	WL	5	5														5	5
	NR	17	17														17	17
	NT																	
	NL	13	13														13	13
	ER	13	13														13	13
ET	1599	1639					5%		11		10%	5%	36	35	-18	64	1703	
EL			90%		21		32%		70		20%		72		23	186	186	
11	Sheridan Drive/ Frankhauser Road																	
	SR	40	40		2%		1			6		10%		70	12		88	128
	ST																	
	SL	52	52									5%		35	15		50	102
	WR	41	41														41	41
	WT	1524	1563		88%		23		32%		39		30%		209	-6	264	1827
	WL																	
	NR																	
	NT																	
	NL																	
	ER																	
ET	1560	1599	90%		21		37%		81		30%		109	-10		200	1799	
EL	34	34									10%		36	10		46	80	
12	Sheridan Drive/ I 290 NB																	
	SR																	
	ST																	
	SL																	
	WR	586	601		2%		1		10%		12		12%		83	2	98	699
	WT	1026	1052		88%		23		27%		33		28%		195	4	254	1306
	WL																	
	NR	386	396	88%		20		6%		13		5%		18			51	447
	NT	0	0															
	NL	309	317															309
	ER																	
ET	1228	1259	2%		0		31%		68		35%		127			195	1454	
EL	346	355															346	355

A3

Level of Service: Criteria and Definitions

Level of Service Criteria

Highway Capacity Manual 2010

SIGNALIZED INTERSECTIONS

Level of Service is a qualitative measure describing operational conditions within a traffic stream, based on service measures such as speed and travel time, freedom to maneuver, traffic interruptions, comfort, and convenience. Level of Service for signalized intersections is defined in terms of delay specifically, average total delay per vehicle for a 15 minute analysis period. The ranges are as follows:

Level of Service	Control Delay per vehicle (seconds)
A	< 10
B	10 – 20
C	20 – 35
D	35 – 55
E	55 – 80
F	>80

UNSIGNALIZED INTERSECTIONS

Level of Service for unsignalized intersections is also defined in terms of delay. However, the delay criteria are different from a signalized intersection. The primary reason for this is driver expectation that a signalized intersection is designed to carry higher volumes than an unsignalized intersection. The total delay threshold for any given Level of Service is less for an unsignalized intersection than for a signalized intersection. The ranges are as follows:

Level of Service	Control Delay per vehicle (seconds)
A	< 10
B	10 – 15
C	15 – 25
D	25 – 35
E	35 - 50
F	>50

A4

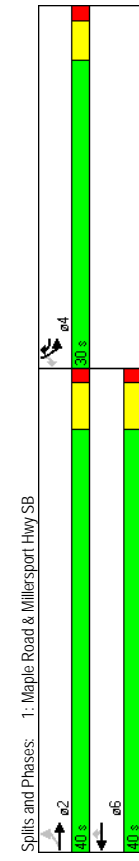
Level of Service Calculations: Existing Conditions

Proposed Westwood Mixed Use Neighborhood 2013 Existing Conditions - AM Peak Hour
 1: Maple Road & Millersport Hwy SB 4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	18	545	758	297	25	81
Volume (vph)	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	150	150	0	0	0	0
Storage Length (ft)	1	1	1	1	1	1
Storage Lanes	35	100	25	25	25	25
Taper Length (ft)	1.00	0.95	1.00	1.00	1.00	1.00
Lane Util. Factor	0.950	0.850	0.950	0.850	0.950	0.850
Flt Protected	1770	3539	1583	1770	1583	1770
Satd. Flow (prot)	0.353	0.950	0.950	0.950	0.950	0.950
Flt Permitted	658	3539	1583	1770	1583	1770
Satd. Flow (perm)	45	45	45	30	30	104
Right Turn on Red	555	654	281	281	281	281
Satd. Flow (RTOR)	8.4	9.9	6.4	6.4	6.4	6.4
Link Speed (mph)	0.91	0.91	0.96	0.96	0.78	0.78
Link Distance (ft)	20	599	790	309	32	104
Travel Time (s)	20	599	790	309	32	104
Peak Hour Factor	20	599	790	309	32	104
Adj. Flow (vph)	No	No	No	No	No	No
Shared Lane Traffic (%)	Left	Left	Right	Left	Right	Right
Lane Group Flow (vph)	12	12	12	12	12	12
Enter Blocked Intersection	0	0	0	0	0	0
Lane Alignment	16	16	16	16	16	16
Median Width(ft)	Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes
Link Offset(ft)	1.00	1.00	1.00	1.00	1.00	1.00
Crosswalk Width(ft)	15	2	2	1	1	1
Two way Left Turn Lane	Left	Thru	Right	Left	Right	Right
Headway Factor	20	100	100	20	20	20
Turning Speed (mph)	0	0	0	0	0	0
Number of Detectors	0	0	0	0	0	0
Detector Template	0	0	0	0	0	0
Leading Detector (ft)	20	6	6	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94	94	94	94	94	94
Detector 2 Size(ft)	6	6	6	6	6	6
Detector 2 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 2 Channel	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	2	6	pm+ov	4	4
Protected Phases	2	2	6	6	4	4
Permitted Phases	2	2	6	6	4	4
Detector Phase	2	2	6	6	4	4

Proposed Westwood Mixed Use Neighborhood 2013 Existing Conditions - AM Peak Hour
 1: Maple Road & Millersport Hwy SB 4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Switch Phase	4.0	4.0	4.0	1.0	1.0	1.0
Minimum Initial (s)	9.1	9.1	9.1	6.2	6.2	6.2
Minimum Split (s)	40.0	40.0	40.0	30.0	30.0	30.0
Total Split (s)	57.1%	57.1%	57.1%	42.9%	42.9%	42.9%
Total Split (%)	34.9	34.9	34.9	25.4	25.4	25.4
Maximum Green (s)	3.9	3.9	3.9	3.2	3.2	3.2
Yellow Time (s)	1.2	1.2	1.2	1.4	1.4	1.4
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	5.1	5.1	5.1	4.6	4.6	4.6
Total Lost Time (s)	Lead-Lag Optimize?	3.0	3.0	3.0	3.0	3.0
Lead-Lag	Vehicle Extension (s)	52.9	52.9	70.0	7.4	7.4
Recall Mode	C-Min	0.76	0.76	1.00	0.11	0.11
Act Effct Green (s)	C-Min	0.04	0.22	0.30	0.20	0.17
Actuated g/C Ratio	2.8	2.9	4.8	0.2	29.7	11.4
v/c Ratio	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay	2.8	2.9	4.8	0.2	29.7	11.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.8	2.9	4.8	0.2	29.7	11.4
LOS	A	A	A	A	C	B
Approach Delay	A	A	A	A	C	B
Approach LOS	A	A	A	A	C	B

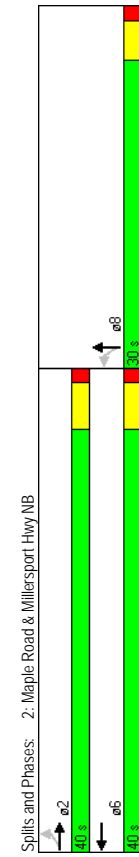


Proposed Westwood Mixed Use Neighborhood 2013 Existing Conditions - AM Peak Hour
 2: Maple Road & Millersport Hwy NB 4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	41	529	0	0	912	51	143	1	452	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	0	0	0	0	0	0	0	0	0
Storage Lanes	1	0	0	0	0	0	1	0	0	0	0
Taper Length (ft)	50	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.950				0.992		0.950		0.850		
Satd. Flow (prot)	1770	3539	0	0	3511	0	1770	1583	0	0	0
Flt Permitted	0.226				0.950		0.950				
Satd. Flow (perm)	421	3539	0	0	3511	0	1770	1583	0	0	0
Right Turn on Red			Yes			Yes			Yes		Yes
Satd. Flow (RTOR)			12			12			213		
Link Speed (mph)		45			45				30		30
Link Distance (ft)		654			1770				319		263
Travel Time (s)		9.9			26.8				7.3		6.0
Peak Hour Factor	0.85	0.85	0.85	0.93	0.93	0.93	0.93	0.93	0.93	0.92	0.92
Adj. Flow (vph)	48	622	0	0	981	55	154	1	486	0	0
Shared Lane Traffic (%)											
Lane Group Flow (vph)	48	622	0	0	1036	0	154	487	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Left	Right	Left	Right
Median Width(ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9	15	9	15	9	15
Number of Detectors	1	2	2	2	2	2	2	2	2	2	2
Detector Template	Left	Thru	Thru	Left	Thru	Left	Thru	Left	Thru	Left	Thru
Leading Detector (ft)	20	100	100	100	100	20	100	20	100	20	100
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	6	6	20	6	6	6	6	6
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94	94	94	94	94	94	94	94	94	94	94
Detector 2 Size(ft)	6	6	6	6	6	6	6	6	6	6	6
Detector 2 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 2 Channel											
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm
Protected Phases	2	2	2	2	2	2	2	2	2	2	2
Permitted Phases	2	2	2	2	2	2	2	2	2	2	2
Detector Phase	2	2	2	2	2	2	2	2	2	2	2

Proposed Westwood Mixed Use Neighborhood 2013 Existing Conditions - AM Peak Hour
 2: Maple Road & Millersport Hwy NB 4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	1.0	1.0	1.0	4.0	4.0	4.0	1.0	1.0	1.0	1.0	1.0
Minimum Split (s)	6.1	6.1	6.1	9.1	9.1	9.1	6.2	6.2	6.2	6.2	6.2
Total Split (s)	40.0	40.0	40.0	0.0	0.0	0.0	30.0	30.0	30.0	0.0	0.0
Total Split (%)	57.1%	57.1%	57.1%	0.0%	0.0%	0.0%	42.9%	42.9%	42.9%	0.0%	0.0%
Maximum Green (s)	34.9	34.9	34.9	34.9	34.9	34.9	25.4	25.4	25.4	25.4	25.4
Yellow Time (s)	3.9	3.9	3.9	3.9	3.9	3.9	3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.2	1.2	1.2	1.2	1.2	1.2	1.4	1.4	1.4	1.4	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	4.0	4.0	4.0	4.6	4.6	4.6	4.0	4.0
Lead-Lag											
Lead-Lag Optimize?											
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
Recall Mode	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	41.1	41.1	41.1	41.1	41.1	41.1	19.2	19.2	19.2	19.2	19.2
Actuated g/C Ratio	0.59	0.59	0.59	0.59	0.59	0.59	0.27	0.27	0.27	0.27	0.27
v/c Ratio	0.19	0.30	0.30	0.50	0.50	0.50	0.32	0.83	0.83	0.83	0.83
Control Delay	12.2	8.8	8.8	10.6	10.6	10.6	20.1	25.0	25.0	25.0	25.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.2	8.8	8.8	10.6	10.6	10.6	20.1	25.0	25.0	25.0	25.0
LOS	B	A	A	B	B	B	C	C	C	C	C
Approach Delay											
Approach LOS	A	A	A	B	B	B	C	C	C	C	C
Intersection Summary											
Area Type:	Other										
Cycle Length:	70										
Offset:	5 (7%), Referenced to phase 2:EBTL and 6:WBT, Start of Green										
Natural Cycle:	45										
Control Type:	Actuated-Coordinated										
Maximum v/c Ratio:	0.83										
Intersection Signal Delay:	13.8										
Intersection Capacity Utilization:	70.2%										
Analysis Period (min):	15										



Splits and Phases: 2: Maple Road & Millersport Hwy NB

Proposed Westwood Mixed Use Neighborhood 2013 Existing Conditions - AM Peak Hour
4: Maple Road & Donna Lea Blvd 4/24/2014

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔	↔↔	↔↔	↔↔	↔
Volume (veh/h)	892	6	13	969	24	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	50	0	0	0	0
Storage Lanes	0	1	0	1	0	0
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Flt Protected	0.999		0.950	0.986		0.904
Flt Permitted			0.950	0.986		0.986
Satd. Flow (prot)	3536	0	1770	3539	1660	0
Satd. Flow (perm)	3536	0	1770	3539	1660	0
Link Speed (mph)	45		45	30		30
Link Distance (ft)	1106		1928	355		355
Travel Time (s)	16.8		29.2	8.1		8.1
Peak Hour Factor	0.79	0.79	0.87	0.87	0.76	0.76
Adj. Flow (vph)	1129	8	15	1114	32	80
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1137	0	15	1114	112	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12		12	12		12
Link Offset(ft)	0		0	0		0
Crosswalk Width(ft)	16		16	16		16
Two way Left Turn Lane	Yes		Yes			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15	15	15	15	9
Sign Control	Free	Free	Free	Free	Stop	Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	38.5%					
Analysis Period (min)	15					
ICU Level of Service:	A					

Proposed Westwood Mixed Use Neighborhood 2013 Existing Conditions - AM Peak Hour
4: Maple Road & Donna Lea Blvd 4/24/2014

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔	↔↔	↔↔	↔↔	↔
Volume (veh/h)	892	6	13	969	24	61
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%		0%	0%		0%
Peak Hour Factor	0.79	0.79	0.87	0.87	0.76	0.76
Hourly flow rate (vph)	1129	8	15	1114	32	80
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLT		TWLT			
Median storage (veh)	2		2			
Upstream signal (ft)	1106					
pX, platoon unblocked			0.88		0.88	0.88
vC, conflicting volume			1137		1720	568
vC1, stage 1 conf vol					1133	
vC2, stage 2 conf vol					587	
vCu, unblocked vol			893		1552	250
IC, single (s)			4.1		6.8	6.9
IC, 2 stage (s)					5.8	
IF (s)			2.2		3.5	3.3
p0 queue free %			98		89	88
cM capacity (veh/h)			668		276	663
Direction, Lane #						
EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	NB 2
753	384	15	557	557	112	
Volume Total	0	0	15	0	0	32
Volume Left	0	8	0	0	0	80
Volume Right	1700	1700	668	1700	1700	475
cSH	0.44	0.23	0.02	0.33	0.33	0.24
Volume to Capacity	0	0	2	0	0	23
Queue Length 95th (ft)	0.0	0.0	10.5	0.0	0.0	14.9
Control Delay (s)	0.0	0.0	10.5	0.0	0.0	14.9
Lane LOS			B			B
Approach Delay (s)	0.0	0.1				14.9
Approach LOS						B
Intersection Summary						
Average Delay	0.8					
Intersection Capacity Utilization	38.5%					
ICU Level of Service	A					
Analysis Period (min)	15					

Proposed Westwood Mixed Use Neighborhood 2013 Existing Conditions - AM Peak Hour
 5: Maple Road & Audubon Golf Club 4/24/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	1	944	4	1	988	2	13	0	3	1	0
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	100	0	50	0	0	0	0	0	0	0	0
Storage Length (ft)	1	0	1	0	0	0	0	0	0	0	0
Storage Lanes	25	25	25	25	25	25	25	25	25	25	25
Taper Length (ft)	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.999					0.976					
Flt Protected	0.950		0.950		0.960		0.960		0.950		0.950
Satd. Flow (prot)	1770	3536	0	1770	3539	0	1745	0	1745	0	1770
Flt Permitted	0.950		0.950		0.960		0.960		0.950		0.950
Satd. Flow (perm)	1770	3536	0	1770	3539	0	1745	0	1745	0	1770
Link Speed (mph)	45	45	45	45	45	30	30	30	30	30	30
Link Distance (ft)	446	446	556	446	556	469	469	469	469	469	469
Travel Time (s)	6.8	6.8	8.4	6.8	8.4	10.7	10.7	10.7	10.7	10.7	10.7
Adj. Flow (vph)	1	1026	4	1	1074	2	14	0	3	1	0
Shared Lane Traffic (%)	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Lane Group Flow (vph)	1	1030	0	1	1076	0	17	0	17	0	1
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Right
Median Width (ft)	12	12	12	12	12	0	0	0	0	0	0
Link Offset (ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width (ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane	Yes		Yes		Yes		Yes		Yes		Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9	15	9	15	9	15
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free
Intersection Summary											
Area Type:	Other										
Control Type:	Unsignalized										
Intersection Capacity Utilization	37.4%										
Analysis Period (min)	15										
ICU Level of Service:	A										

Proposed Westwood Mixed Use Neighborhood 2013 Existing Conditions - AM Peak Hour
 5: Maple Road & Audubon Golf Club 4/24/2014

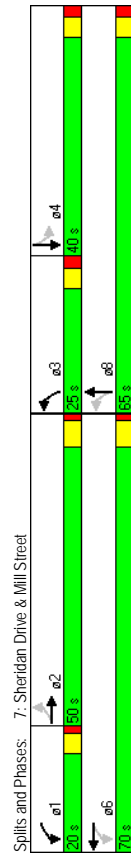
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	1	944	4	1	988	2	13	0	3	1	0
Volume (veh/h)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	1026	4	1	1074	2	14	0	3	1	0
Pedestrians											
Lane Width (ft)											
Walking Speed (ft/s)											
Percent Blockage											
Right turn flare (veh)											
Median type											
Median storage (veh)											
Upstream signal (ft)											
pX, platoon unblocked											
vC, conflicting volume	1076		1030				1570	2109	515	1996	2110
vC1, stage 1 conf vol							1030	1030		1077	1077
vC2, stage 2 conf vol							539	1078		518	1033
vCu, unblocked vol	1076		1030				1570	2109	515	1996	2110
IC, single (s)	4.1		4.1				7.5	6.5	6.9	7.5	6.5
IC, 2 stage (s)							6.5	5.5	5.5	6.5	5.5
IF (s)	2.2		2.2				3.5	4.0	3.3	3.5	4.0
p0 queue free %	100		100				94	100	99	99	100
cM capacity (veh/h)	644		670				225	211	505	213	211
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	1	684	346	1	716	360	17	1			
Volume Left	1	0	0	1	0	0	14	1			
Volume Right	0	0	4	0	0	2	3	0			
cSH	644	1700	1700	670	1700	1700	251	213			
Volume to Capacity	0.00	0.40	0.20	0.00	0.42	0.21	0.07	0.01			
Queue Length 95th (ft)	0	0	0	0	0	0	6	0			
Control Delay (s)	10.6	0.0	0.0	10.4	0.0	0.0	20.4	22.0			
Lane LOS	B			B			C	C			
Approach Delay (s)	0.0		0.0	0.0			20.4	22.0			
Approach LOS							C	C			
Intersection Summary											
Average Delay	0.2										
Intersection Capacity Utilization	37.4%										
Analysis Period (min)	15										
ICU Level of Service:	A										

Proposed Westwood Mixed Use Neighborhood 2013 Existing Conditions - AM Peak Hour
 7: Sheridan Drive & Mill Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	5	1240	119	215	942	9	97	21	122	30	146
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	100	0	150	0	150	0	40	0	75	0	75
Storage Length (ft)	1	0	1	0	1	0	1	0	1	0	1
Storage Lanes	65	25	60	25	60	25	25	25	60	25	60
Taper Length (ft)	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Lane Util. Factor	0.987		0.999		0.999		0.872		0.950		0.986
Flt Protected	0.950		0.950		0.950		0.950		0.950		0.950
Satd. Flow (prot)	1770	3493	0	1770	3536	0	1770	1624	0	1770	1837
Flt Permitted	0.268		0.080		0.234		0.234		0.601		0.601
Satd. Flow (perm)	499	3493	0	149	3536	0	436	1624	0	1120	1837
Right Turn on Red			No		Yes		Yes		No		Yes
Satd. Flow (RTOR)			1		1		1		1		4
Link Speed (mph)	45		45		45		30		30		30
Link Distance (ft)	2782		977		977		838		838		362
Travel Time (s)	42.2		14.8		14.8		19.0		19.0		8.2
Peak Hour Factor	0.86	0.86	0.89	0.89	0.89	0.89	0.56	0.56	0.56	0.61	0.61
Adj. Flow (vph)	6	1442	138	242	1058	10	173	38	218	49	239
Shared Lane Traffic (%)											
Lane Group Flow (vph)	6	1580	0	242	1068	0	173	256	0	49	264
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Right	Right
Median Width(ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset(ft)	16		16		16		16		16		16
Crosswalk Width(ft)	16		16		16		16		16		16
Two way Left Turn Lane	Yes		Yes		Yes		Yes		Yes		Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9	15	9	15	9	15
Number of Detectors	1	2	1	2	1	2	1	2	1	2	1
Detector Template	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left
Leading Detector (ft)	20	100	20	100	20	100	20	100	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	6	20	6	20	6	20	6	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94	0.0	94	0.0	94	0.0	94	0.0	94	0.0	94
Detector 2 Size(ft)	6	6	6	6	6	6	6	6	6	6	6
Detector 2 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 2 Channel											
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm		pm+pt		pm+pt		pm+pt		pm+pt		Perm
Protected Phases	2	2	6	1	6	3	8	8	4	4	4
Permitted Phases	2	2	6	1	6	3	8	8	4	4	4
Detector Phase	2	2	6	1	6	3	8	8	4	4	4

Proposed Westwood Mixed Use Neighborhood 2013 Existing Conditions - AM Peak Hour
 7: Sheridan Drive & Mill Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase	4.0	4.0	1.0	4.0	4.0	1.0	4.0	4.0	4.0	4.0	4.0
Minimum Initial (s)	28.3	28.3	6.2	28.3	6.2	28.3	6.2	34.2	34.2	34.2	34.2
Minimum Split (s)	50.0	50.0	0.0	20.0	70.0	0.0	25.0	65.0	0.0	40.0	40.0
Total Split (s)	37.0%	37.0%	0.0%	14.8%	51.9%	0.0%	18.5%	48.1%	0.0%	29.6%	29.6%
Total Split (%)	44.5	44.5	15.7	64.5	19.8	59.8	34.8	34.8	34.8	34.8	34.8
Maximum Green (s)	4.3	4.3	3.2	4.3	3.2	4.3	3.2	3.2	3.2	3.2	3.2
Yellow Time (s)	1.2	1.2	1.1	1.2	1.1	1.2	2.0	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	5.5	5.5	4.0	4.3	5.5	4.0	5.2	5.2	4.0	5.2	5.2
Total Lost Time (s)	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead/Lag	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Lead-Lag Optimize?	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Vehicle Extension (s)	Max	Max	None	Max	None	Max	None	None	None	None	None
Recall Mode	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Walk Time (s)	15.0	15.0	15.0	15.0	15.0	15.0	22.0	22.0	22.0	22.0	22.0
Flash Dont Walk (s)	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Calls (#/hr)	45.6	45.6	66.1	64.9	40.3	40.3	40.3	40.3	21.5	21.5	21.5
Act Effct Green (s)	0.39	0.39	0.57	0.56	0.35	0.35	0.19	0.19	0.19	0.19	0.19
Actuated g/C Ratio	0.03	1.15	0.82	0.54	0.56	0.45	0.24	0.77	0.24	0.77	0.77
v/c Ratio	27.2	110.5	51.4	18.7	34.0	31.4	43.2	59.5	43.2	59.5	59.5
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	27.2	110.5	51.4	18.7	34.0	31.4	43.2	59.5	43.2	59.5	59.5
Total Delay	C	F	D	B	C	C	C	C	D	D	E
LOS	110.2	24.7	C	C	32.5	C	56.9	C	C	C	E
Approach Delay	F	C	C	C	C	C	C	C	C	C	C
Approach LOS											
Intersection Summary	Other										
Area Type:	Other										
Cycle Length:	135										
Actuated Cycle Length:	116										
Natural Cycle:	120										
Control Type:	Semi Act-Uncoordinated										
Maximum v/c Ratio:	1.15										
Intersection Signal Delay:	65.7										
Intersection Capacity Utilization:	80.8%										
Analysis Period (min):	15										

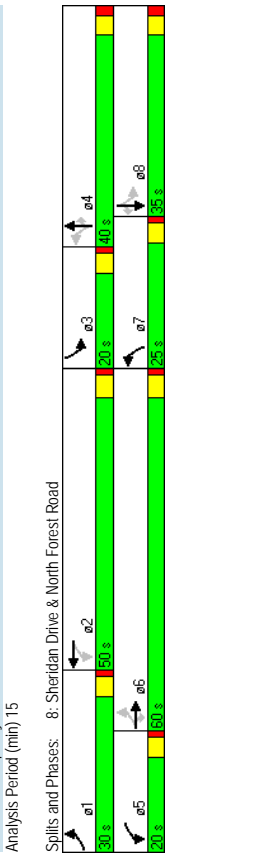


Proposed Westwood Mixed Use Neighborhood 2013 Existing Conditions - AM Peak Hour
8: Sheridan Drive & North Forest Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	88	1254	192	177	990	19	200	332	22	11	426
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	405	170	260	0	180	0	265	180	200	200	200
Storage Length (ft)	1	1	1	0	1	0	1	1	1	1	1
Storage Lanes	200	25	200	25	25	25	25	25	25	25	25
Taper Length (ft)	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.95	1.00
Lane Util. Factor	0.850	0.850	0.997				0.850			0.850	0.850
Flt Protected	0.950		0.950		0.950		0.950		0.950		0.950
Satd. Flow (prot)	1770	3539	1583	1770	3529	0	1770	1863	1583	1770	3539
Flt Permitted	0.143		0.067		0.208		0.490		0.490		0.490
Satd. Flow (perm)	266	3539	1583	125	3529	0	387	1863	1583	913	3539
Right Turn on Red	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Satd. Flow (RTOR)	96		1		1		24		24		330
Link Speed (mph)	45		45		45		40		40		35
Link Distance (ft)	1668		2219		547		354		354		6.9
Travel Time (s)	25.3		33.6		9.3		6.9		6.9		0.9
Peak Hour Factor	0.95	0.95	0.92	0.92	0.92	0.92	0.90	0.90	0.90	0.84	0.84
Adj. Flow (vph)	93	1320	202	192	1076	21	222	369	24	13	507
Shared Lane Traffic (%)	93	1320	202	192	1097	0	222	369	24	13	507
Lane Group Flow (vph)	No	No	No	No	No	No	No	No	No	No	No
Enter Blocked Intersection	Left	Left	Right	Left	Right	Left	Left	Right	Left	Right	Right
Lane Alignment	12	12	12	12	12	12	12	12	12	12	12
Median Width (ft)	0	0	0	0	0	0	0	0	0	0	0
Link Offset (ft)	16		16		16		16		16		16
Crosswalk Width (ft)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Two way Left Turn Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Headway Factor	15	9	15	9	15	9	15	9	15	9	15
Turning Speed (mph)	1	2	1	2	1	2	1	2	1	2	1
Number of Detectors	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru
Detector Template	20	100	20	100	20	100	20	100	20	100	20
Leading Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size (ft)	20	6	20	20	6	20	6	20	20	6	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position (ft)	94		94		94		94		94		94
Detector 2 Size (ft)	6		6		6		6		6		6
Detector 2 Type	CI+EX		CI+EX		CI+EX		CI+EX		CI+EX		CI+EX
Detector 2 Channel	0.0		0.0		0.0		0.0		0.0		0.0
Detector 2 Extend (s)	pm+pt		pm+pt		pm+pt		pm+pt		pm+pt		pm+pt
Turn Type	1	6	5	2	7	4	3	8	3	8	8
Protected Phases	6	6	6	2	4	4	4	8	4	8	8
Permitted Phases	1	6	6	5	2	7	4	4	4	3	8
Detector Phase											

Proposed Westwood Mixed Use Neighborhood 2013 Existing Conditions - AM Peak Hour
8: Sheridan Drive & North Forest Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Initial (s)	8.3	27.9	27.9	8.3	27.9	8.3	27.9	27.9	27.9	8.3	27.9
Minimum Split (s)	3.00	60.0	60.0	20.0	50.0	0.0	25.0	40.0	40.0	20.0	35.0
Total Split (s)	21.4%	42.9%	42.9%	14.3%	35.7%	0.0%	17.9%	28.6%	28.6%	14.3%	25.0%
Total Split (%)	25.7	54.9	54.9	15.7	44.9	20.7	34.9	34.9	34.9	15.7	29.9
Maximum Green (s)	3.2	3.9	3.9	3.2	3.9	3.2	3.2	3.2	3.2	3.2	3.2
Yellow Time (s)	1.1	1.2	1.2	1.1	1.2	1.1	1.1	1.1	1.1	1.1	1.1
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	4.3	5.1	5.1	4.3	5.1	4.0	4.3	5.1	5.1	4.3	5.1
Total Lost Time (s)	Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead/Lag	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Lead-Lag Optimize?	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Vehicle Extension (s)	None	Max	None	Max	None	None	None	None	None	None	None
Recall Mode	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Walk Time (s)	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Flash Dont Walk (s)	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Calls (#/hr)	65.0	55.3	55.3	73.6	60.1	48.2	43.2	43.2	43.2	31.9	24.9
Act Effct Green (s)	0.50	0.42	0.42	0.56	0.46	0.37	0.33	0.33	0.24	0.19	0.19
Actuated g/C Ratio	0.40	0.88	0.28	0.79	0.68	0.66	0.60	0.60	0.04	0.05	0.58
v/c Ratio	20.1	44.6	15.2	54.6	31.9	39.9	42.5	12.1	27.5	58.3	9.1
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	20.1	44.6	15.2	54.6	31.9	39.9	42.5	12.1	27.5	58.3	9.1
Total Delay	C	D	B	D	C	D	D	D	B	C	E
LOS	39.5	D	D	D	C	D	D	D	D	C	E
Approach Delay	D	D	D	D	D	D	D	D	D	D	D
Approach LOS											



Proposed Westwood Mixed Use Neighborhood
 9: Country Club Drive & North Forest Road

2013 Existing Conditions - AM Peak Hour
 4/24/2014

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			4		
Volume (veh/h)	1	1	8	431	713	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fit	0.932			0.999		
Fit Protected	0.976			0.999		
Satd. Flow (prot)	1694	0	0	1861	1861	0
Fit Permitted	0.976			0.999		
Satd. Flow (perm)	1694	0	0	1861	1861	0
Link Speed (mph)	30			35	35	
Link Distance (ft)	208			310	192	
Travel Time (s)	4.7			6.0	3.7	
Peak Hour Factor	0.50	0.50	0.83	0.83	0.94	0.94
Adj. Flow (vph)	2	2	10	519	759	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	4	0	0	529	764	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	Free	Free	9
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	47.8%					
Analysis Period (min)	15					
ICU Level of Service	A					

Proposed Westwood Mixed Use Neighborhood
 9: Country Club Drive & North Forest Road

2013 Existing Conditions - AM Peak Hour
 4/24/2014

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			4		
Volume (veh/h)	1	1	8	431	713	5
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.50	0.50	0.83	0.83	0.94	0.94
Hourly flow rate (vph)	2	2	10	519	759	5
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)				None	None	
Median type				None	None	
Median storage (veh)				664		
Upstream signal (ft)						
pX, platoon unblocked	0.83					
vC, conflicting volume	1300	761	764			
vC1, stage 1 cont vol						
vC2, stage 2 cont vol						
vCu, unblocked vol	1258	761	764			
IC, single (s)	6.4	6.2	4.1			
IC, 2 stage (s)						
IF (s)	3.5	3.3	2.2			
p0 queue free %	99	100	99			
cM capacity (veh/h)	154	405	849			
Direction, Lane #						
	EB 1	NB 1	SB 1			
Volume Total	4	529	764			
Volume Left	2	10	0			
Volume Right	2	0	5			
cSH	224	849	1700			
Volume to Capacity	0.02	0.01	0.45			
Queue Length 95th (ft)	1	1	0			
Control Delay (s)	21.4	0.3	0.0			
Lane LOS	C	A				
Approach Delay (s)	21.4	0.3	0.0			
Approach LOS	C					
Intersection Summary						
Average Delay	0.2					
Intersection Capacity Utilization	47.8%					
ICU Level of Service	A					
Analysis Period (min)	15					

Proposed Westwood Mixed Use Neighborhood
 10: Sheridan Drive & Fenwick Road

2013 Existing Conditions - AM Peak Hour
 4/24/2014

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔	↔↔	↔↔	↔↔	↔
Volume (veh/h)	1525	6	4	1463	16	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	75	0	0	0	0
Storage Lanes	0	1	1	0	0	0
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Flt Protected	0.999		0.950	0.969		
Satd. Flow (prot)	3536	0	1770	3539	1717	0
Flt Permitted	0.950		0.950	0.969		
Satd. Flow (perm)	3536	0	1770	3539	1717	0
Link Speed (mph)	45		45	30		
Link Distance (ft)	635		1668	278		
Travel Time (s)	9.6		25.3	6.3		
Peak Hour Factor	0.88	0.88	0.90	0.90	0.69	0.69
Adj. Flow (vph)	1733	7	4	1626	23	13
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1740	0	4	1626	36	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12		12	12		12
Link Offset(ft)	0		0	0		0
Crosswalk Width(ft)	16		16	16		16
Two way Left Turn Lane	Yes		Yes			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15	15	15	15	9
Sign Control	Free	Free	Free	Free	Stop	Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	52.3%					
Analysis Period (min)	15					
ICU Level of Service:	A					

Proposed Westwood Mixed Use Neighborhood
 10: Sheridan Drive & Fenwick Road

2013 Existing Conditions - AM Peak Hour
 4/24/2014

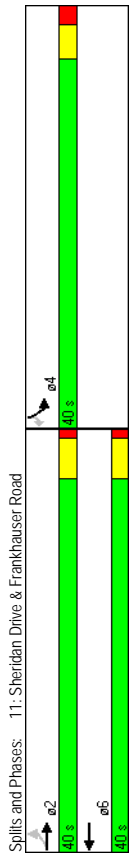
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔	↔↔	↔↔	↔↔	↔
Volume (veh/h)	1525	6	4	1463	16	9
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%		0%	0%	0%	0%
Peak Hour Factor	0.88	0.88	0.90	0.90	0.69	0.69
Hourly flow rate (vph)	1733	7	4	1626	23	13
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLT		TWLT			
Median storage (veh)	2		2			
Upstream signal (ft)	635					
pX, platoon unblocked		0.78		0.78		0.78
vC, conflicting volume		1740		2558		870
vC1, stage 1 conf vol				1736		
vC2, stage 2 conf vol				822		
vCu, unblocked vol		1383		2433		266
IC, single (s)		4.1		6.8		6.9
IC, 2 stage (s)				5.8		
IF (s)		2.2		3.5		3.3
p0 queue free %		99		83		98
cM capacity (veh/h)		383		140		570
Direction, Lane #						
Volume Total	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Left	1155	584	4	813	813	36
Volume Right	0	0	4	0	0	23
cSH	1700	1700	383	1700	1700	192
Volume to Capacity	0.68	0.34	0.01	0.48	0.48	0.19
Queue Length 95th (ft)	0	0	1	0	0	17
Control Delay (s)	0.0	0.0	14.5	0.0	0.0	28.1
Lane LOS			B			D
Approach Delay (s)	0.0	0.0	0.0			28.1
Approach LOS						D
Intersection Summary						
Average Delay	0.3					
Intersection Capacity Utilization	52.3%					
Analysis Period (min)	15					
ICU Level of Service:	A					

Proposed Westwood Mixed Use Neighborhood 2013 Existing Conditions - AM Peak Hour
11: Sheridan Drive & Frankhauser Road 4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (vph)	26	1493	1455	24	38	29
Ideal Flow (vppf)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105	0	0	0	0	50
Storage Lanes	1	0	0	1	1	1
Taper Length (ft)	65	25	25	25	25	25
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Flt Protected	0.950	0.998			0.850	
Satd. Flow (prot)	1770	3539	3532	0	1770	1583
Flt Permitted	0.137				0.950	
Satd. Flow (perm)	255	3539	3532	0	1770	1583
Right Turn on Red		Yes			Yes	
Satd. Flow (RTOR)		3			9	
Link Speed (mph)	45	45			30	
Link Distance (ft)	101.4	635			614	
Travel Time (s)	15.4	9.6			14.0	
Peak Hour Factor	0.89	0.89	0.94	0.94	0.73	0.73
Adj. Flow (vph)	29	1678	1548	26	52	40
Shared Lane Traffic (%)						
Lane Group Flow (vph)	29	1678	1574	0	52	40
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Right
Median Width(ft)	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	2	2	9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Left	Right	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94	94				
Detector 2 Size(ft)	6	6			6	
Detector 2 Type	CI+EX	CI+EX			CI+EX	
Detector 2 Channel						
Detector 2 Extend (s)	0.0	0.0			0.0	
Turn Type	Perm				Perm	
Protected Phases	2	2	6	4	4	4
Permitted Phases	2	2	6	4	4	4

Proposed Westwood Mixed Use Neighborhood 2013 Existing Conditions - AM Peak Hour
11: Sheridan Drive & Frankhauser Road 4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	1.0	1.0
Minimum Split (s)	40.0	40.0	40.0	40.0	31.1	31.1
Total Split (s)	40.0	40.0	40.0	40.0	40.0	40.0
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Maximum Green (s)	35.2	35.2	35.2	34.9	34.9	34.9
Yellow Time (s)	3.9	3.9	3.9	3.2	3.2	3.2
All-Red Time (s)	0.9	0.9	0.9	1.9	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.8	4.8	4.8	4.0	5.1	5.1
Lead-Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0	15.0	19.0	19.0	19.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effct Green (s)	65.3	65.3	65.3	7.8	7.8	7.8
Actuated g/C Ratio	0.82	0.82	0.82	0.10	0.10	0.10
v/c Ratio	0.14	0.58	0.55	0.30	0.25	0.25
Control Delay	4.4	4.6	4.3	37.3	30.6	30.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.4	4.6	4.3	37.3	30.6	30.6
LOS	A	A	A	D	D	C
Approach Delay	4.6	4.3	4.3	34.4		
Approach LOS	A	A	A	C		
Intersection Summary	Other					
Area Type:	Other					
Cycle Length:	80					
Actuated Cycle Length:	80					
Offset:	76 (95%), Referenced to phase 2:EBTL and 6:WBT, Start of Green					
Natural Cycle:	75					
Control Type:	Actuated-Coordinator					
Maximum v/c Ratio:	0.58					
Intersection Signal Delay:	5.3					
Intersection Capacity Utilization:	52.9%					
Analysis Period (min):	15					

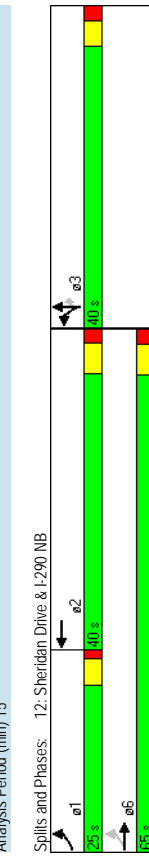


Proposed Westwood Mixed Use Neighborhood 2013 Existing Conditions - AM Peak Hour
 12: Sheridan Drive & I-290 NB 4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	243	1339	0	0	963	478	262	0	215	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	0	0	0	230	0	0	120	0	0
Storage Lanes	1	0	0	0	0	1	0	0	1	0	0
Taper Length (ft)	105	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.95	0.91	0.91	0.95	1.00	1.00
Flt Protected	0.950				0.950		0.940		0.850		
Satd. Flow (prot)	1770	5085	0	0	4831	0	1681	1547	1504	0	0
Flt Permitted	0.110				0.950		0.971		0.971		
Satd. Flow (perm)	205	5085	0	0	4831	0	1681	1547	1504	0	0
Right Turn on Red		Yes			Yes		Yes	Yes	Yes	Yes	Yes
Satd. Flow (RTOR)		45			127		34		36		
Link Speed (mph)		197			45		30		30		30
Link Distance (ft)		3.0			2.9		18.9		18.9		9.6
Travel Time (s)		0.94			0.94		0.88		0.88		0.92
Peak Hour Factor		259			1424		0		1024		509
Adj. Flow (vph)		0.94			0.94		0.94		0.88		0.88
Shared Lane Traffic (%)							37%		30%		30%
Lane Group Flow (vph)	No	No	No	No	No	No	188	183	171	0	0
Enter Blocked Intersection	Left	Left	Right	Left	Right	Left	Left	Left	Right	Left	Right
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Left	Right	Left	Right
Median Width(ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Headway Factor	15	9	15	9	15	9	15	9	15	9	15
Turning Speed (mph)	1	2	1	2	1	2	1	2	1	2	1
Number of Detectors	Left	Thru	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Detector Template	20	100	100	100	20	100	20	100	20	100	20
Leading Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	20	6	20	6	20	6	20	6	20	6	20
Detector 1 Size(ft)	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Type	Detector 1 Channel	Detector 1 Extend (s)	Detector 1 Queue (s)	Detector 1 Delay (s)	Detector 2 Position(ft)	Detector 2 Size(ft)	Detector 2 Type	Detector 2 Channel	Detector 2 Extend (s)	Turn Type	Protected Phases
Detector 1 Channel	0.0	0.0	0.0	0.0	94	6	CI+EX	CI+EX	0.0	pm+pt	1
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	6	6	CI+EX	CI+EX	0.0	Protected Phases	6
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	CI+EX	CI+EX	CI+EX	CI+EX	0.0	Permitted Phases	6
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Detector Phase	1
Detector 2 Position(ft)	94	94	94	94	0.0	0.0	0.0	0.0	0.0	Volume	6
Detector 2 Size(ft)	6	6	6	6	0.0	0.0	0.0	0.0	0.0	Timings	6
Detector 2 Type	CI+EX	CI+EX	CI+EX	CI+EX	0.0	0.0	0.0	0.0	0.0	SRF & Associates	6
Detector 2 Channel	CI+EX	CI+EX	CI+EX	CI+EX	0.0	0.0	0.0	0.0	0.0	Page 23	6
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		6
Turn Type	pm+pt	pm+pt	pm+pt	pm+pt	0.0	0.0	0.0	0.0	0.0		6
Protected Phases	1	6	1	6	0.0	0.0	0.0	0.0	0.0		6
Permitted Phases	6	6	6	6	0.0	0.0	0.0	0.0	0.0		6
Detector Phase	1	6	1	6	0.0	0.0	0.0	0.0	0.0		6

Proposed Westwood Mixed Use Neighborhood 2013 Existing Conditions - AM Peak Hour
 12: Sheridan Drive & I-290 NB 4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	1.0	4.0			4.0		4.0	4.0	4.0		
Minimum Split (s)	6.2	33.9			27.8		29.0	29.0	29.0		
Total Split (s)	25.0	65.0	0.0	0.0	40.0	0.0	40.0	40.0	40.0	0.0	0.0
Total Split (%)	23.8%	61.9%	0.0%	0.0%	38.1%	0.0%	38.1%	38.1%	38.1%	0.0%	0.0%
Maximum Green (s)	20.7	59.1			34.2		34.8	34.8	34.8		
Yellow Time (s)	3.2	3.9			3.9		3.2	3.2	3.2		
All-Red Time (s)	1.1	2.0			1.9		2.0	2.0	2.0		
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.3	5.9	4.0	4.0	5.8	4.0	5.2	5.2	5.2	4.0	4.0
Lead/Lag	Lead	Lag			Lag						
Vehicle Extension (s)	2.0	3.0			3.0		2.0	2.0	2.0		
Recall Mode	None	C-Max			C-Max		None	None	None		
Walk Time (s)	7.0	7.0			7.0						
Flash Dont Walk (s)	21.0	15.0			15.0						
Pedestrian Calls (#/hr)	0	0			0						
Act Effct Green (s)	78.7	77.1			59.7		16.8	16.8	16.8		
Actuated g/C Ratio	0.75	0.73			0.57		0.16	0.16	0.16		
v/c Ratio	0.74	0.38			0.55		0.70	0.66	0.63		
Control Delay	27.2	6.0			15.5		54.9	44.4	42.0		
Queue Delay	0.0	0.0			0.0		0.0	0.0	0.0		
Total Delay	27.2	6.0			15.5		54.9	44.4	42.0		
LOS	C	A			B		D	D	D		
Approach Delay	9.3	9.3			15.5		47.3	47.3	47.3		
Approach LOS	A	A			B		D	D	D		



Proposed Westwood Mixed Use Neighborhood
 13: Sheridan Drive & Harlem Road

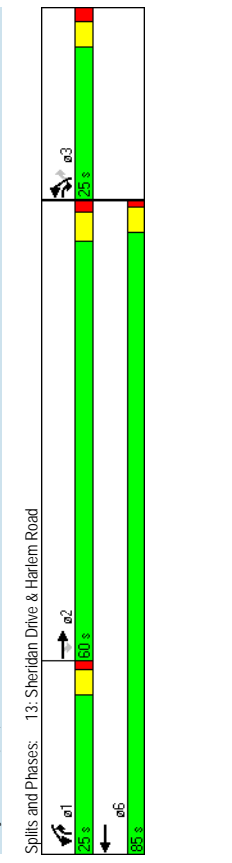
2013 Existing Conditions - AM Peak Hour
 4/24/2014

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔	↔↔	↔↔	↔↔	↔↔
Volume (vph)	799	307	448	777	278	783
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	215	0	140	0	0
Storage Lanes	1	1	1	2	2	2
Taper Length (ft)	230	100	100	100	25	25
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	0.88
Flt Protected		0.850				0.850
Satd. Flow (prot)	3539	1583	3433	3539	3433	2787
Flt Permitted		0.950				0.950
Satd. Flow (perm)	3539	1583	3433	3539	3433	2787
Right Turn on Red	No					Yes
Satd. Flow (RTOR)						154
Link Speed (mph)	45			45	35	
Link Distance (ft)	314			413	338	
Travel Time (s)	4.8			6.3	6.6	
Peak Hour Factor	0.85	0.85	0.92	0.92	0.90	0.90
Adj. Flow (vph)	940	361	487	845	309	870
Shared Lane Traffic (%)						
Lane Group Flow (vph)	940	361	487	845	309	870
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Right	Right
Median Width(ft)	12		24	24	24	
Link Offset(ft)	0		0	0	0	
Crosswalk Width(ft)	16		16	16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		15	15	9
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (ft)	100	20	20	100	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	6	20	20	6	20	20
Detector 1 Type	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Ch+Ex			Ch+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type		pm+ov	Prot			pm+ov
Protected Phases	2	3	1	6	3	1
Permitted Phases	2	3	1	6	3	1
Detector Phase	2	3	1	6	3	1

Proposed Westwood Mixed Use Neighborhood
 13: Sheridan Drive & Harlem Road

2013 Existing Conditions - AM Peak Hour
 4/24/2014

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Switch Phase						
Minimum Initial (s)	1.0	1.0	1.0	4.0	1.0	1.0
Minimum Split (s)	30.5	6.2	5.3	32.3	6.2	5.3
Total Split (s)	60.0	25.0	25.0	85.0	25.0	25.0
Total Split (%)	54.5%	22.7%	22.7%	77.3%	22.7%	22.7%
Maximum Green (s)	54.5	19.8	20.7	80.7	19.8	20.7
Yellow Time (s)	3.9	3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.6	2.0	1.1	1.1	2.0	1.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.2	4.3	4.3	5.2	4.3
Lead/Lag	Lag	Lead	Lead	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	C-Max	None	None	None	None	None
Walk Time (s)	7.0			7.0		
Flash Dont Walk (s)	18.0			21.0		
Pedestrian Calls (#/hr)	0			0		
Act Effct Green (s)	60.8	80.5	20.0	86.3	14.2	39.4
Actuated g/C Ratio	0.55	0.73	0.18	0.78	0.13	0.36
v/c Ratio	0.48	0.31	0.78	0.30	0.70	0.79
Control Delay	16.9	6.3	52.2	3.9	54.2	31.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.9	6.3	52.2	3.9	54.2	31.1
LOS	B	A	D	A	D	C
Approach Delay	14.0			21.5		37.2
Approach LOS	B			C		D



Proposed Westwood Mixed Use Neighborhood 2013 Existing Conditions - AM Peak Hour
 14: I-290 SB & Harlem Road 4/24/2014

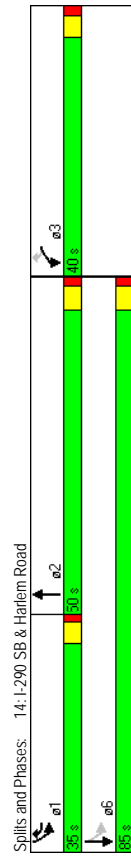
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (vph)	291	664	435	20	369	355
Ideal Flow (vppf)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	0	0	330	0
Storage Lanes	1	1	0	0	1	0
Taper Length (ft)	25	25	25	25	75	25
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Flt	0.850	0.993				
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	3514	0	1770	3539
Flt Permitted	0.950				0.272	
Satd. Flow (perm)	1770	1583	3514	0	507	3539
Right Turn on Red	Yes	Yes	Yes	Yes		
Satd. Flow (RTOR)	176	4				
Link Speed (mph)	30	35				35
Link Distance (ft)	333	250				456
Travel Time (s)	7.6	4.9				8.9
Peak Hour Factor	0.81	0.81	0.87	0.87	0.88	0.88
Adj. Flow (vph)	359	820	500	23	419	403
Shared Lane Traffic (%)						
Lane Group Flow (vph)	359	820	523	0	419	403
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12	12				12
Link Offset(ft)	0	0				0
Crosswalk Width(ft)	16	16				16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9			9	15
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru	Left	Thru	
Leading Detector (ft)	20	20	100	20	100	
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	6	
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			CI+EX			CI+EX
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type		pm+ov			pm+pl	
Protected Phases	3	1	2	1	1	6
Permitted Phases	3	1	2	1	1	6
Detector Phase	3	1	2	1	1	6

Proposed Westwood Mixed Use Neighborhood 2013 Existing Conditions - AM Peak Hour
 14: I-290 SB & Harlem Road 4/24/2014

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	9.2	30.6	9.2	21.0	21.0
Total Split (s)	40.0	35.0	50.0	0.0	35.0	85.0
Total Split (%)	32.0%	28.0%	40.0%	0.0%	28.0%	68.0%
Maximum Green (s)	35.2	30.7	45.0	30.7	80.0	80.0
Yellow Time (s)	3.2	3.2	3.6	3.2	3.6	3.6
All-Red Time (s)	1.6	1.1	1.4	1.1	1.4	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.8	4.3	5.0	4.0	4.3	5.0
Lead/Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Min	None	None	None
Walk Time (s)			10.0			
Flash Dont Walk (s)			15.0			
Pedestrian Calls (#/hr)			0			
Act Effct Green (s)	21.6	47.0	18.5	44.0	43.3	43.3
Actuated g/C Ratio	0.29	0.62	0.25	0.58	0.57	0.57
v/c Ratio	0.71	0.78	0.61	0.66	0.20	0.20
Control Delay	34.2	14.3	30.2	15.5	8.5	8.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.2	14.3	30.2	15.5	8.5	8.5
LOS	C	B	C	B	A	A
Approach Delay	20.4	30.2			12.1	
Approach LOS	C	C			B	

Intersection Summary

Area Type:	Other
Cycle Length:	125
Actuated Cycle Length:	75.4
Natural Cycle:	70
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.78
Intersection Signal Delay:	19.7
Intersection Capacity Utilization:	61.5%
Analysis Period (min):	15
Intersection LOS:	B
ICU Level of Service:	B

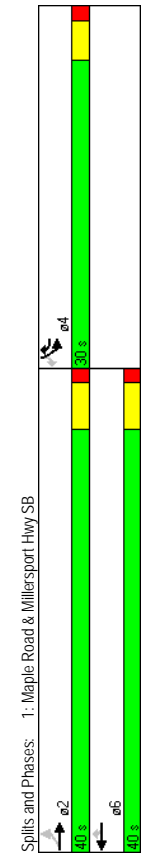


Proposed Westwood Mixed Use Neighborhood 2013 Existing Conditions - PM Peak Hour
 1: Maple Road & Millersport Hwy SB 4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (vph)	28	913	820	221	54	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	0	0	0	0	0
Storage Lanes	1	1	1	1	1	1
Taper Length (ft)	35	100	25	25	25	25
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Flt Protected	0.950			0.850	0.850	
Satd. Flow (prot)	1770	3539	3539	1583	1770	1583
Flt Permitted	0.305			0.950		
Satd. Flow (perm)	568	3539	3539	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)		45	45		30	102
Link Speed (mph)		555	654		281	
Link Distance (ft)		8.4	9.9		6.4	
Travel Time (s)		0.90	0.92	0.92	0.81	0.81
Peak Hour Factor		31	1014	891	240	67
Adj. Flow (vph)		31	1014	891	240	67
Shared Lane Traffic (%)		No	No	No	No	No
Lane Group Flow (vph)		No	No	No	No	No
Enter Blocked Intersection		Left	Left	Right	Left	Right
Lane Alignment		Left	Left	Right	Left	Right
Median Width(ft)		12	12	12	12	12
Link Offset(ft)		0	0	0	0	0
Crosswalk Width(ft)		16	16	16	16	16
Two way Left Turn Lane		Yes				
Headway Factor		1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		15	2	2	9	15
Number of Detectors		1	2	2	1	1
Detector Template		Left	Thru	Thru	Right	Left
Leading Detector (ft)		20	100	100	20	20
Trailing Detector (ft)		0	0	0	0	0
Detector 1 Position(ft)		0	0	0	0	0
Detector 1 Size(ft)		20	6	6	20	20
Detector 1 Type		CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)		0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)		0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		CI+EX	CI+EX			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type		Perm		pm+ov	Perm	
Protected Phases		2	6	6	4	4
Permitted Phases		2	2	6	4	4
Detector Phase		2	2	6	4	4

Proposed Westwood Mixed Use Neighborhood 2013 Existing Conditions - PM Peak Hour
 1: Maple Road & Millersport Hwy SB 4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	1.0	1.0	1.0
Minimum Split (s)	9.1	9.1	9.1	6.2	6.2	6.2
Total Split (s)	40.0	40.0	40.0	30.0	30.0	30.0
Total Split (%)	57.1%	57.1%	57.1%	42.9%	42.9%	42.9%
Maximum Green (s)	34.9	34.9	34.9	25.4	25.4	25.4
Yellow Time (s)	3.9	3.9	3.9	3.2	3.2	3.2
All-Red Time (s)	1.2	1.2	1.2	1.4	1.4	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	4.6	4.6	4.6
Lead-Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Min	C-Min	C-Min	None	None	None
Act Effct Green (s)	49.4	49.4	49.4	70.0	70.0	70.0
Actuated g/C Ratio	0.71	0.71	0.71	1.00	1.00	1.00
v/c Ratio	0.08	0.41	0.36	0.15	0.24	0.63
Control Delay	5.1	5.5	7.6	0.2	26.0	22.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.1	5.5	7.6	0.2	26.0	22.5
LOS	A	A	A	A	C	C
Approach Delay						
Approach LOS	A	A	A	A	C	C



Proposed Westwood Mixed Use Neighborhood 2013 Existing Conditions - PM Peak Hour
 2: Maple Road & Millersport Hwy NB

4/24/2014

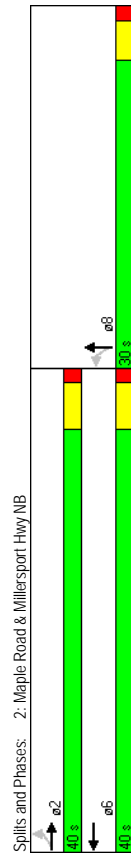
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	95	872	0	0	952	23	89	0	451	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	0	0	0	0	0	0	0	0	0
Storage Lanes	1	0	0	0	0	1	0	0	0	0	0
Taper Length (ft)	50	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.950				0.997		0.950				
Satd. Flow (prot)	1770	3539	0	0	3529	0	1770	1583	0	0	0
Flt Permitted	0.174				0.950		0.950				
Satd. Flow (perm)	324	3539	0	0	3529	0	1770	1583	0	0	0
Right Turn on Red			Yes		Yes		Yes	Yes			Yes
Satd. Flow (RTOR)		45			5		85				30
Link Speed (mph)		654			1770		319				263
Link Distance (ft)		9.9			26.8		7.3				6.0
Travel Time (s)		0.91			0.87		0.84				0.92
Peak Hour Factor		104			958		0				537
Adj. Flow (vph)		104			958		0				537
Shared Lane Traffic (%)		0			0		106				0
Lane Group Flow (vph)		104			958		0				537
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Median Width (ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset (ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width (ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9	15	9	15	9	15
Number of Detectors	1	2	2	2	2	2	1	2	2	2	2
Detector Template	Left	Thru	Thru	Left	Thru	Thru	Left	Thru	Left	Thru	Thru
Leading Detector (ft)	20	100	100	100	100	20	100	100	100	100	100
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size (ft)	20	6	6	6	6	20	6	6	6	6	6
Detector 1 Type	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position (ft)	94	94	94	94	94	94	94	94	94	94	94
Detector 2 Size (ft)	6	6	6	6	6	6	6	6	6	6	6
Detector 2 Type	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 2 Channel											
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm
Protected Phases	2	2	2	2	2	2	2	2	2	2	2
Permitted Phases	2	2	2	2	2	2	2	2	2	2	2
Detector Phase	2	2	2	2	2	2	2	2	2	2	2

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Proposed Westwood Mixed Use Neighborhood 2013 Existing Conditions - PM Peak Hour
 2: Maple Road & Millersport Hwy NB

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	1.0	1.0	1.0	4.0	4.0	4.0	1.0	1.0	1.0	1.0	1.0
Minimum Split (s)	6.1	6.1	6.1	9.1	9.1	9.1	6.2	6.2	6.2	6.2	6.2
Total Split (s)	40.0	40.0	40.0	0.0	0.0	0.0	30.0	30.0	30.0	0.0	0.0
Total Split (%)	57.1%	57.1%	57.1%	0.0%	0.0%	0.0%	42.9%	42.9%	42.9%	0.0%	0.0%
Maximum Green (s)	34.9	34.9	34.9	34.9	34.9	34.9	25.4	25.4	25.4	25.4	25.4
Yellow Time (s)	3.9	3.9	3.9	3.9	3.9	3.9	3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.2	1.2	1.2	1.2	1.2	1.2	1.4	1.4	1.4	1.4	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	4.0	4.0	4.0	4.6	4.6	4.6	4.0	4.0
Lead-Lag											
Lead-Lag Optimize?											
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	None	None	None	None	None
Recall Mode	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	36.1	36.1	36.1	36.1	36.1	36.1	24.2	24.2	24.2	24.2	24.2
Actuated g/C Ratio	0.52	0.52	0.52	0.52	0.52	0.52	0.35	0.35	0.35	0.35	0.35
v/c Ratio	0.62	0.52	0.52	0.61	0.61	0.61	0.17	0.17	0.17	0.17	0.17
Control Delay	31.8	11.0	11.0	14.3	14.3	14.3	16.0	16.0	16.0	37.4	37.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.8	11.0	11.0	14.3	14.3	14.3	16.0	16.0	16.0	37.4	37.4
LOS	C	B	B	B	B	B	B	B	B	D	D
Approach Delay											
Approach LOS	B	B	B	B	B	B	B	B	B	C	C
Intersection Summary											
Area Type:	Other										
Cycle Length:	70										
Actuated Cycle Length:	70										
Offset:	5 (7%), Referenced to phase 2:EBTL and 6:WBT, Start of Green										
Natural Cycle:	60										
Control Type:	Actuated-Coordinated										
Maximum v/c Ratio:	0.89										
Intersection Signal Delay:	18.3										
Intersection LOS:	B										
Intersection Capacity Utilization:	72.6%										
Analysis Period (min):	15										



Splits and Phases: 2: Maple Road & Millersport Hwy NB

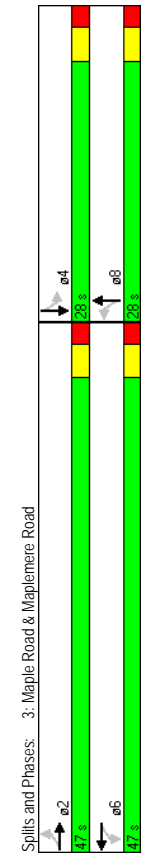
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Proposed Westwood Mixed Use Neighborhood 2013 Existing Conditions - PM Peak Hour
3: Maple Road & Maplemere Road 4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	35	1188	35	21	868	60	22	0	12	75	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	70	0	0	0	0	0	0	0	0
Storage Lanes	1	0	1	0	0	0	0	0	0	0	0
Taper Length (ft)	50	25	50	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Fit	0.950	0.996	0.950	0.990	0.990	0.952	0.964	0.969	0.964	0.964	0.964
Satd. Flow (prot)	1770	3525	0	1770	3504	0	1718	0	1718	0	1738
Fit Permitted	0.239	0	0.169	0.792	0.792	0.952	0.964	0.969	0.964	0.964	0.964
Right Turn on Red	445	3525	0	315	3504	0	1404	0	1377	0	1377
Satd. Flow (RTOR)	6	Yes	15	Yes	15	Yes	19	Yes	25	Yes	25
Link Speed (mph)	45	45	45	45	45	45	30	30	30	30	30
Link Distance (ft)	1770	1106	1106	1106	1106	378	402	402	402	402	402
Travel Time (s)	26.8	16.8	16.8	16.8	16.8	8.6	9.1	9.1	9.1	9.1	9.1
Peak Hour Factor	0.94	0.94	0.94	0.87	0.87	0.87	0.62	0.62	0.62	0.81	0.81
Adj. Flow (vph)	37	1264	37	24	998	69	35	0	19	93	10
Shared Lane Traffic (%)	37	1301	0	24	1067	0	54	0	54	0	140
Lane Group Flow (vph)	No	No	No	No	No	No	No	No	No	No	No
Enter Blocked Intersection	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	12	0	12	0	0	0	0	0	0	0	0
Link Offset(ft)	16	16	16	16	16	16	16	16	16	16	16
Crosswalk Width(ft)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	15	9	15	15	9	15	15	9
Number of Detectors	1	2	1	2	1	2	1	2	1	2	2
Detector Template	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Thru
Leading Detector (ft)	20	100	20	100	20	100	20	100	20	100	100
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	6	20	6	20	6	20	6	6
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94	94	94	94	94	94	94	94	94	94	94
Detector 2 Size(ft)	6	6	6	6	6	6	6	6	6	6	6
Detector 2 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 2 Channel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Extend (s)	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm
Turn Type	2	2	6	6	6	6	8	8	8	4	4
Protected Phases	2	2	6	6	6	6	8	8	8	4	4
Detector Phase	2	2	6	6	6	6	8	8	8	4	4

Proposed Westwood Mixed Use Neighborhood 2013 Existing Conditions - PM Peak Hour
3: Maple Road & Maplemere Road 4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	9.0	9.0	9.0	9.0	9.0	27.0	27.0	27.0	27.0	27.0
Total Split (s)	47.0	47.0	0.0	47.0	47.0	0.0	28.0	28.0	0.0	28.0	28.0
Total Split (%)	62.7%	62.7%	0.0%	62.7%	62.7%	0.0%	37.3%	37.3%	0.0%	37.3%	37.3%
Maximum Green (s)	42.0	42.0	42.0	42.0	42.0	42.0	23.0	23.0	0.0	23.0	23.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
LeadLag											
Lead-Lag Optimize?											
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	None	None	None	None	3.0
Recall Mode	Min	Min	Min	Min	Min	Min	None	None	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	15.0	15.0	15.0	15.0	7.0
Flash Dont Walk (s)	15.0	15.0	15.0	15.0	15.0	15.0	0	0	0	0	0
Pedestrian Calls (#/hr)											
Act Effct Green (s)	32.1	32.1	32.1	32.1	32.1	32.1	8.8	8.8	0	0	10.0
Actuated g/C Ratio	0.67	0.67	0.67	0.67	0.67	0.67	0.18	0.18	0.21	0.21	0.21
v/c Ratio	0.12	0.55	0.11	0.45	0.45	0.20	0.20	0.20	0.46	0.46	0.46
Control Delay	6.5	7.4	6.9	6.4	6.4	6.4	15.2	15.2	15.2	21.1	21.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.5	7.4	6.9	6.4	6.4	6.4	15.2	15.2	15.2	21.1	21.1
LOS	A	A	A	A	A	A	B	B	B	B	C
Approach Delay	7.4	7.4	6.5	6.5	6.5	6.5	15.2	15.2	15.2	21.1	21.1
Approach LOS	A	A	A	A	A	A	B	B	B	B	C
Intersection Summary											
Area Type:	Other										
Cycle Length:	75										
Actuated Cycle Length:	47.9										
Natural Cycle:	60										
Control Type:	Actuated-Uncoordinated										
Maximum v/c Ratio:	0.55										
Intersection Signal Delay:	7.9										
Intersection Capacity Utilization:	49.9%										
Analysis Period (min):	15										



Proposed Westwood Mixed Use Neighborhood 2013 Existing Conditions - PM Peak Hour
4: Maple Road & Donna Lea Blvd 4/24/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔↔	↔↔	↔↔	↔↔	↔↔
Volume (vph)	1246	29	23	937	12	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	50	0	0	0	0
Storage Lanes	0	1	0	1	0	0
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Flt	0.997		0.914		0.982	
Flt Protected		0.950		0.982		
Satd. Flow (prot)	3529	0	1770	3539	1672	0
Flt Permitted		0.950		0.982		
Satd. Flow (perm)	3529	0	1770	3539	1672	0
Link Speed (mph)	45		45	30		30
Link Distance (ft)	1106		1928	355		355
Travel Time (s)	16.8		29.2	8.1		8.1
Adj. Flow (vph)	1707	40	30	1217	15	26
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1747	0	30	1217	41	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12		12	12		12
Link Offset(ft)	0		0	0		0
Crosswalk Width(ft)	16		16	16		16
Two way Left Turn Lane	Yes		Yes			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15	15	15	15	9
Sign Control	Free	Free	Free	Free	Stop	Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	45.4%					
Analysis Period (min)	15					
ICU Level of Service:	A					

Proposed Westwood Mixed Use Neighborhood 2013 Existing Conditions - PM Peak Hour
4: Maple Road & Donna Lea Blvd 4/24/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔↔	↔↔	↔↔	↔↔	↔↔
Volume (veh/h)	1246	29	23	937	12	21
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%		0%	0%		0%
Peak Hour Factor	0.73	0.73	0.77	0.77	0.82	0.82
Hourly flow rate (vph)	1707	40	30	1217	15	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			TWLT			
Median storage (veh)	2			2		
Upstream signal (ft)	1106					
pX, platoon unblocked		0.78		0.78	0.78	0.78
vC, conflicting volume		1747		2395	873	873
vC1, stage 1 conf vol				1727		
vC2, stage 2 conf vol				668		
vCu, unblocked vol		1393		2224	274	274
IC, single (s)		4.1		6.8	6.9	6.9
IC, 2 stage (s)				5.8		
IF (s)		2.2		3.5	3.3	3.3
p0 queue free %		92		90	95	95
cM capacity (veh/h)		380		144	565	565
Direction, Lane #						
	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	1138	609	30	608	608	40
Volume Left	0	0	30	0	0	15
Volume Right	0	40	0	0	0	26
cSH	1700	1700	380	1700	1700	274
Volume to Capacity	0.67	0.36	0.08	0.36	0.36	0.15
Queue Length 95th (ft)	0	0	6	0	0	13
Control Delay (s)	0.0	0.0	15.3	0.0	0.0	20.4
Lane LOS			C			C
Approach Delay (s)	0.0	0.4				20.4
Approach LOS						C
Intersection Summary						
Average Delay	0.4					
Intersection Capacity Utilization	45.4%					
ICU Level of Service	A					
Analysis Period (min)	15					

Proposed Westwood Mixed Use Neighborhood 2013 Existing Conditions - PM Peak Hour
5: Maple Road & Audubon Golf Club 4/24/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	0	1260	14	8	960	2	10	0	6	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	50	0	0	0	0	0	0	0	0
Storage Lanes	1	0	1	0	0	0	0	0	0	0	0
Taper Length (ft)	25	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Flt Protected		0.998			0.950		0.948		0.970		
Flt Permitted	1863	3532	0	1770	3539	0	1713	0	0	1863	0
Satd. Flow (perm)	1863	3532	0	1770	3539	0	1713	0	0	1863	0
Link Speed (mph)	45	6.8	45	45	556	45	30	469	10.7	2.5	111
Link Distance (ft)	446	6.8	446	556	8.4	469	10.7	469	10.7	2.5	111
Travel Time (s)	6.8	10.7	6.8	8.4	10.7	6.8	10.7	6.8	10.7	6.8	10.7
Adj. Flow (vph)	0	1370	15	9	1032	2	16	0	10	0	0
Shared Lane Traffic (%)	0	1385	0	9	1034	0	26	0	0	0	0
Lane Group Flow (vph)	No	No	No	No	No	No	No	No	No	No	No
Enter Blocked Intersection	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left
Lane Alignment	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left
Median Width (ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset (ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width (ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9	15	9	15	9	15
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free
Intersection Summary											
Area Type:	Other										
Control Type:	Unsignalized										
Intersection Capacity Utilization	45.3%										
Analysis Period (min)	15										
ICU Level of Service:	A										

Proposed Westwood Mixed Use Neighborhood 2013 Existing Conditions - PM Peak Hour
5: Maple Road & Audubon Golf Club 4/24/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (veh/h)	0	1260	14	8	960	2	10	0	6	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.93	0.93	0.93	0.61	0.61	0.61	0.92	0.92
Hourly flow rate (vph)	0	1370	15	9	1032	2	16	0	10	0	0
Pedestrians											
Lane Width (ft)											
Walking Speed (ft/s)											
Percent Blockage											
Right turn flare (veh)											
Median type	TWLT	TWLT	TWLT	TWLT	TWLT	TWLT	TWLT	TWLT	TWLT	TWLT	TWLT
Median storage (veh)	2	2	2	2	2	2	2	2	2	2	2
Upstream signal (ft)											
pX, platoon unblocked											
vC, conflicting volume	1034		1385				1911	2429	692	1745	2435
vC1, stage 1 conf vol							1377	1377		1051	1051
vC2, stage 2 conf vol							533	1052		695	1385
vCu, unblocked vol	1034		1385				1911	2429	692	1745	2435
IC, single (s)	4.1		4.1				7.5	6.5	6.9	7.5	6.5
IC, 2 stage (s)							6.5	5.5	5.5	6.5	5.5
IF (s)	2.2		2.2				3.5	4.0	3.3	3.5	4.0
p0 queue free %	100		98				89	100	97	100	100
cM capacity (veh/h)	668		491				144	168	386	202	163
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 1	SB 1	SB 1	SB 1
Volume Total	0	913	472	9	688	346	26	0	0	0	0
Volume Left	0	0	0	9	0	0	16	0	0	0	0
Volume Right	0	0	15	0	0	2	10	0	0	0	0
cSH	1700	1700	1700	491	1700	1700	188	1700	1700	1700	1700
Volume to Capacity	0.00	0.54	0.28	0.02	0.40	0.20	0.14	0.00	0.00	0.00	0.00
Queue Length 95th (ft)	0	0	0	1	0	0	12	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	12.5	0.0	0.0	27.2	0.0	0.0	0.0	0.0
Lane LOS				B			D		A		
Approach Delay (s)	0.0		0.1				27.2		0.0		
Approach LOS							D		A		
Intersection Summary											
Average Delay	0.3										
Intersection Capacity Utilization	45.3%										
ICU Level of Service	A										
Analysis Period (min)	15										

Proposed Westwood Mixed Use Neighborhood
 6: Maple Road & North Forest Road

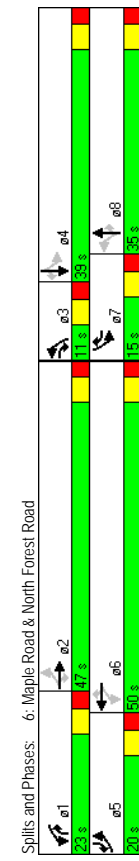
2013 Existing Conditions - PM Peak Hour
 4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	177	960	139	230	718	94	90	338	197	165	375
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	415	220	315	220	315	150	125	220	250	250	250
Storage Lanes	1	1	1	1	1	1	1	1	1	1	1
Taper Length (ft)	90	115	60	25	95	25	95	25	90	90	25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.950			0.950			0.950			0.950	0.850
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1863	1583	1770	1863
Flt Permitted	0.238			0.098			0.194			0.197	
Satd. Flow (perm)	443	3539	1583	183	3539	1583	361	1863	1583	367	1863
Right Turn on Red	Yes			No			No		Yes		Yes
Satd. Flow (RTOR)	143			143			33			33	84
Link Speed (mph)	45			45			35			35	35
Link Distance (ft)	1705			820			529			608	608
Travel Time (s)	25.8			12.4			10.3			11.8	11.8
Peak Hour Factor	0.92	0.92	0.92	0.90	0.90	0.90	0.96	0.96	0.96	0.87	0.87
Adj. Flow (vph)	192	1043	151	256	798	104	94	352	205	190	431
Shared Lane Traffic (%)											
Lane Group Flow (vph)	192	1043	151	256	798	104	94	352	205	190	431
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Left	Right	Left	Right
Median Width(ft)	12			12			12			12	12
Link Offset(ft)	0			0			0			0	0
Crosswalk Width(ft)	16			16			16			16	16
Two way Left Turn Lane	Yes			Yes			Yes			Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	2	1	2	1	2	1	1	2
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru
Leading Detector (ft)	20	100	20	100	20	100	20	100	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6
Detector 1 Type	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94			94			94	94
Detector 2 Size(ft)	6			6			6			6	6
Detector 2 Type	Ch+Ex			Ch+Ex			Ch+Ex			Ch+Ex	Ch+Ex
Detector 2 Channel											
Detector 2 Extend (s)	0.0			0.0			0.0			0.0	0.0
Turn Type	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+ov
Protected Phases	5	2	3	1	6	7	3	8	1	7	4
Permitted Phases	2	2	2	6	6	6	8	8	8	4	4
Detector Phase	5	2	3	1	6	7	3	8	1	7	4

Proposed Westwood Mixed Use Neighborhood
 6: Maple Road & North Forest Road

2013 Existing Conditions - PM Peak Hour
 4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	1.0	4.0	1.0	1.0	4.0	1.0	1.0	4.0	1.0	1.0	4.0
Minimum Split (s)	7.0	35.0	7.0	7.0	35.0	7.0	7.0	35.0	7.0	7.0	35.0
Total Split (s)	20.0	47.0	11.0	23.0	50.0	15.0	11.0	35.0	23.0	15.0	39.0
Total Split (%)	16.7%	39.2%	9.2%	19.2%	41.7%	12.5%	9.2%	29.2%	19.2%	12.5%	32.5%
Maximum Green (s)	14.0	41.0	5.0	17.0	44.0	9.0	5.0	29.0	17.0	9.0	33.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lead	Lead	Lead	Lead	Lead	Lead	Lead	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Walk Time (s)	7.0			7.0			7.0			7.0	7.0
Flash Dont Walk (s)	22.0			22.0			22.0			22.0	22.0
Pedestrian Calls (#/hr)	0			0			0			0	0
Act Effct Green (s)	49.3	37.5	48.7	56.2	41.0	56.2	30.4	25.4	46.7	38.5	29.4
Actuated g/C Ratio	0.44	0.34	0.44	0.50	0.37	0.50	0.27	0.23	0.42	0.34	0.26
v/c Ratio	0.57	0.88	0.20	0.83	0.61	0.13	0.58	0.83	0.30	0.79	0.88
Control Delay	22.2	44.9	4.6	50.0	31.7	16.4	42.6	59.5	19.5	51.6	60.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.2	44.9	4.6	50.0	31.7	16.4	42.6	59.5	19.5	51.6	60.1
LOS	C	D	A	D	C	B	D	E	B	D	E
Approach Delay	37.4			34.4			44.4			49.0	49.0
Approach LOS	D			C			D			D	D

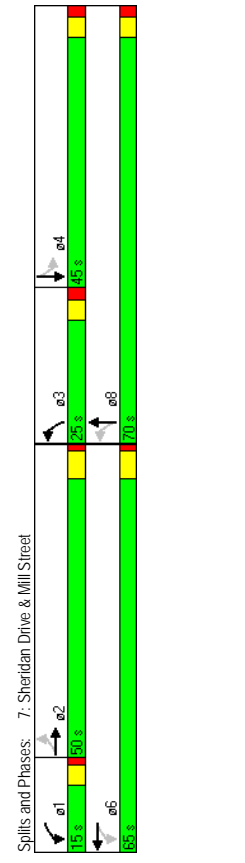


Proposed Westwood Mixed Use Neighborhood 2013 Existing Conditions - PM Peak Hour
7: Sheridan Drive & Mill Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	11	1258	18	118	1299	53	140	53	144	34	68
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	100	0	150	0	150	0	40	0	75	0	75
Storage Length (ft)	1	0	1	0	1	0	0	0	0	1	0
Storage Lanes	65	25	60	25	25	25	25	25	25	25	25
Taper Length (ft)	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.998		0.994		0.994		0.891		0.977		0.977
Flt Protected	0.950		0.950		0.950		0.950		0.950		0.950
Sat'd. Flow (prot)	1770	3532	0	1770	3518	0	1770	1660	0	1770	1820
Flt Permitted	0.089		0.082		0.601		0.601		0.611		0.611
Sat'd. Flow (perm)	166	3532	0	153	3518	0	1120	1660	0	1138	1820
Right Turn on Red	166	3532	0	153	3518	0	1120	1660	0	1138	1820
Sat'd. Flow (RTOR)		No	No	4	Yes	Yes	No	No	No	7	Yes
Link Speed (mph)	45		45		45		30		30		30
Link Distance (ft)	2782		977		838		362		838		362
Travel Time (s)	42.2		14.8		19.0		19.0		19.0		8.2
Peak Hour Factor	0.84	0.84	0.84	0.92	0.92	0.83	0.83	0.83	0.83	0.77	0.77
Adj. Flow (vph)	13	1498	21	128	1412	58	169	64	173	44	88
Shared Lane Traffic (%)	13	1519	0	128	1470	0	169	237	0	44	104
Lane Group Flow (vph)	No	No	No	No	No	No	No	No	No	No	No
Enter Blocked Intersection	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset(ft)	0		0		0		0		0		0
Crosswalk Width(ft)	16		16		16		16		16		16
Two way Left Turn Lane	Yes		Yes		Yes		Yes		Yes		Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9	15	9	15	9	15
Number of Detectors	1	2	1	2	1	2	1	2	1	2	1
Detector Template	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left
Leading Detector (ft)	20	100	20	100	20	100	20	100	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	6	20	6	20	6	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94		94		94		94		94		94
Detector 2 Size(ft)	6		6		6		6		6		6
Detector 2 Type	Cl+Ex		Cl+Ex		Cl+Ex		Cl+Ex		Cl+Ex		Cl+Ex
Detector 2 Channel											
Detector 2 Extend (s)	0.0		0.0		0.0		0.0		0.0		0.0
Turn Type	Perm		pm+pt		pm+pt		pm+pt		Perm		Perm
Protected Phases	2		6		6		3		8		4
Permitted Phases	2		6		6		8		4		4
Detector Phase	2		6		6		3		8		4

Proposed Westwood Mixed Use Neighborhood 2013 Existing Conditions - PM Peak Hour
7: Sheridan Drive & Mill Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase	4.0	4.0	1.0	4.0	4.0	4.0	1.0	4.0	4.0	4.0	4.0
Minimum Initial (s)	28.3	28.3	6.2	28.3	6.2	28.3	6.2	34.2	34.2	34.2	34.2
Minimum Split (s)	50.0	50.0	0.0	15.0	65.0	0.0	25.0	70.0	0.0	45.0	45.0
Total Split (s)	37.0%	37.0%	0.0%	11.1%	48.1%	0.0%	18.5%	51.9%	0.0%	33.3%	33.3%
Total Split (%)	44.5	44.5	10.7	59.5	19.8	64.8	39.8	39.8	39.8	39.8	39.8
Maximum Green (s)	4.3	4.3	3.2	4.3	3.2	4.3	3.2	3.2	3.2	3.2	3.2
Yellow Time (s)	1.2	1.2	1.1	1.2	1.1	1.2	2.0	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	5.5	5.5	4.0	4.3	5.5	4.0	5.2	5.2	4.0	5.2	5.2
Total Lost Time (s)	Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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
Recall Mode	None	None	None	None	None	None	Max	Max	Max	Max	Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0	15.0	15.0	15.0	15.0	22.0	22.0	22.0	22.0	22.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0	0	0	0
Act Effct Green (s)	44.6	44.6	60.1	58.9	64.8	64.8	64.8	64.8	39.8	39.8	39.8
Actuated g/C Ratio	0.33	0.33	0.45	0.44	0.48	0.48	0.30	0.30	0.30	0.30	0.30
v/c Ratio	0.24	1.29	0.68	0.95	0.27	0.30	0.13	0.19	0.13	0.19	0.19
Control Delay	46.2	176.4	43.8	50.5	21.4	22.5	36.4	34.2	36.4	34.2	34.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.2	176.4	43.8	50.5	21.4	22.5	36.4	34.2	36.4	34.2	34.2
LOS	D	F	D	D	D	D	C	C	D	D	C
Approach Delay	175.3	F	50.0	D	D	D	22.0	C	C	C	C
Approach LOS	F	F	D	D	D	D	C	C	C	C	C



Proposed Westwood Mixed Use Neighborhood
 9: Country Club Drive & North Forest Road

2013 Existing Conditions - PM Peak Hour
 4/24/2014

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			4		
Volume (veh/h)	7	9	26	608	696	13
Volume (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fit	0.924			0.998		
Fit Protected	0.979			0.998		
Satd. Flow (prot)	1685	0	0	1859	1859	0
Fit Permitted	0.979			0.998		
Satd. Flow (perm)	1685	0	0	1859	1859	0
Link Speed (mph)	30			35	35	
Link Distance (ft)	217			310	192	
Travel Time (s)	4.9			6.0	3.7	
Peak Hour Factor	0.50	0.50	0.83	0.83	0.90	0.90
Adj. Flow (vph)	14	18	31	733	773	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	32	0	0	764	787	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	Free	Free	9
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	63.1%					
Analysis Period (min)	15					
ICU Level of Service	B					

Proposed Westwood Mixed Use Neighborhood
 9: Country Club Drive & North Forest Road

2013 Existing Conditions - PM Peak Hour
 4/24/2014

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			4		
Volume (veh/h)	7	9	26	608	696	13
Volume (veh/h)	7	9	26	608	696	13
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.50	0.50	0.83	0.83	0.90	0.90
Hourly flow rate (vph)	14	18	31	733	773	14
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)	None					
Upstream signal (ft)	664					
pX, platoon unblocked	0.70					
vC, conflicting volume	1576					
vC1, stage 1 cont vol	781					
vC2, stage 2 cont vol	788					
vCu, unblocked vol	1609					
IC, single (s)	6.4					
IC, 2 stage (s)	6.2					
IF (s)	3.5					
p0 queue free %	82					
cM capacity (veh/h)	77					
cM capacity (veh/h)	395					
cM capacity (veh/h)	832					
Direction, Lane #						
	EB 1	NB 1	SB 1			
Volume Total	32	764	788			
Volume Left	14	31	0			
Volume Right	18	0	14			
cSH	141	832	1700			
Volume to Capacity	0.23	0.04	0.46			
Queue Length 95th (ft)	21	3	0			
Control Delay (s)	37.8	1.0	0.0			
Lane LOS	E	A				
Approach Delay (s)	37.8	1.0	0.0			
Approach LOS	E					
Intersection Summary						
Average Delay	1.2					
Intersection Capacity Utilization	63.1%					
ICU Level of Service	B					
Analysis Period (min)	15					

Proposed Westwood Mixed Use Neighborhood
 10: Sheridan Drive & Fenwick Road
 2013 Existing Conditions - PM Peak Hour
 4/24/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕↕	↕	↕↕	↕↕	↕	↕↕
Volume (vph)	1599	13	5	1552	13	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	75	0	0	0	0
Storage Lanes	0	1	0	1	0	0
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Flt Protected	0.999		0.950	0.922		0.979
Flt Permitted	3536	0	1770	3539	1681	0
Satd. Flow (perm)	3536	0	1770	3539	1681	0
Link Speed (mph)	45		45	30		30
Link Distance (ft)	635		1668	278		278
Travel Time (s)	9.6		25.3	6.3		6.3
Peak Hour Factor	0.87	0.87	0.94	0.94	0.75	0.75
Adj. Flow (vph)	1838	15	5	1651	17	23
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1853	0	5	1651	40	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12		12	12		12
Link Offset(ft)	0		0	0		0
Crosswalk Width(ft)	16		16	16		16
Two way Left Turn Lane	Yes		Yes			Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15	15	15	15	9
Sign Control	Free	Free	Free	Free	Stop	Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	54.6%					
Analysis Period (min)	15					
	ICU Level of Service: A					

Proposed Westwood Mixed Use Neighborhood
 10: Sheridan Drive & Fenwick Road
 2013 Existing Conditions - PM Peak Hour
 4/24/2014

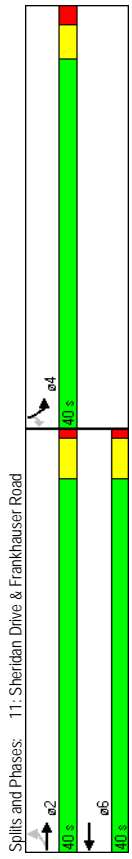
	EBT	EBR	WBL	WBT	NBL	NBR
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕↕	↕	↕↕	↕↕	↕	↕↕
Volume (veh/h)	1599	13	5	1552	13	17
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%		0%	0%		0%
Peak Hour Factor	0.87	0.87	0.94	0.94	0.75	0.75
Hourly flow rate (vph)	1838	15	5	1651	17	23
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLT		TWLT			TWLT
Median storage (veh)	2		2			2
Upstream signal (ft)	635					
pX, platoon unblocked		0.76		0.76		0.76
vC1, stage 1 conf vol		1853		2682		926
vC2, stage 2 conf vol					1845	
vCu, unblocked vol		1481		2578		254
IC, 2 stage (s)		4.1		6.8		6.9
IF (s)		2.2		3.5		3.3
p0 queue free %		98		86		96
cM capacity (veh/h)		340		122		563
Direction, Lane #						
	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	1225	628	5	826	826	40
Volume Left	0	0	5	0	0	17
Volume Right	1700	1700	340	1700	1700	220
cSH	0.72	0.37	0.02	0.49	0.49	0.18
Volume to Capacity	0	0	1	0	0	16
Queue Length 95th (ft)	0.0	0.0	15.8	0.0	0.0	25.0
Control Delay (s)	0.0	0.0	0.1	0.1	0.1	25.0
Lane LOS			C			D
Approach Delay (s)	0.0	0.0	0.1	0.1	0.1	25.0
Approach LOS			D			D
Intersection Summary						
Average Delay	0.3					
Intersection Capacity Utilization	54.6%					
Analysis Period (min)	15					
	ICU Level of Service: A					

Proposed Westwood Mixed Use Neighborhood 2013 Existing Conditions - PM Peak Hour
 11: Sheridan Drive & Frankhauser Road 4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (vph)	34	1560	1524	41	52	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105	0	0	0	0	50
Storage Lanes	1	0	0	1	1	1
Taper Length (ft)	65	25	25	25	25	25
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Flt Protected	0.950	0.996			0.850	
Satd. Flow (prot)	1770	3539	3525	0	1770	1583
Flt Permitted	0.111				0.950	
Satd. Flow (perm)	207	3539	3525	0	1770	1583
Right Turn on Red		Yes			Yes	
Satd. Flow (RTOR)		4			6	
Link Speed (mph)	45	45			30	
Link Distance (ft)	101.4	635			614	
Travel Time (s)	15.4	9.6			14.0	
Peak Hour Factor	0.90	0.90	0.91	0.91	0.82	0.82
Adj. Flow (vph)	38	1733	1675	45	63	49
Shared Lane Traffic (%)						
Lane Group Flow (vph)	38	1733	1720	0	63	49
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Right
Median Width(ft)	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0
Crosswalk Width(ft)	16	16			16	
Two way Left Turn Lane	Yes	Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	2	2	9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Left	Right	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94	94				
Detector 2 Size(ft)	6	6			6	
Detector 2 Type	CI+EX	CI+EX			CI+EX	
Detector 2 Channel						
Detector 2 Extend (s)	0.0	0.0			0.0	
Turn Type	Perm				Perm	
Protected Phases		2	6		4	
Permitted Phases	2				4	4
Detector Phase	2	2	6		4	4

Proposed Westwood Mixed Use Neighborhood 2013 Existing Conditions - PM Peak Hour
 11: Sheridan Drive & Frankhauser Road 4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	1.0	1.0
Minimum Split (s)	40.0	40.0	40.0	40.0	31.1	31.1
Total Split (s)	40.0	40.0	40.0	40.0	40.0	40.0
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Maximum Green (s)	35.2	35.2	35.2	34.9	34.9	34.9
Yellow Time (s)	3.9	3.9	3.9	3.2	3.2	3.2
All-Red Time (s)	0.9	0.9	0.9	0.9	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.8	4.8	4.8	4.0	5.1	5.1
Lead-Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0	15.0	15.0	19.0	19.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effct Green (s)	64.9	64.9	64.9	8.3	8.3	8.3
Actuated g/C Ratio	0.81	0.81	0.81	0.10	0.10	0.10
v/c Ratio	0.23	0.60	0.60	0.34	0.29	0.29
Control Delay	6.9	5.1	5.1	37.7	33.5	33.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.9	5.1	5.1	37.7	33.5	33.5
LOS	A	A	A	D	D	C
Approach Delay	5.1	5.1	5.1	35.8		
Approach LOS	A	A	A	D		
Intersection Summary						
Area Type:	Other					
Cycle Length:	80					
Actuated Cycle Length:	80					
Offset:	55 (69%), Referenced to phase 2:EBTL and 6:WBT, Start of Green					
Natural Cycle:	75					
Control Type:	Actuated-Coordinator					
Maximum v/c Ratio:	0.60					
Intersection Signal Delay:	6.0					
Intersection Capacity Utilization:	55.0%					
Analysis Period (min):	15					

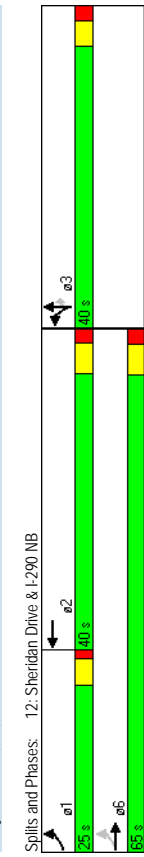


Proposed Westwood Mixed Use Neighborhood 2013 Existing Conditions - PM Peak Hour
 12: Sheridan Drive & I-290 NB 4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	346	1228	0	0	1026	586	309	0	386	0	0
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vpph)	100	0	0	0	230	120	0	0	0	0	0
Storage Length (ft)	1	0	0	0	1	0	1	0	0	0	0
Storage Lanes	105	25	25	25	25	25	25	25	25	25	25
Taper Length (ft)	1.00	0.91	1.00	1.00	0.91	0.91	0.95	0.91	0.95	1.00	1.00
Lane Util. Factor				0.945			0.894	0.850			
Flt Protected	0.950					0.950	0.985				
Satd. Flow (prot)	1770	5085	0	0	4806	0	1681	1493	1504	0	0
Flt Permitted	0.079						0.950	0.985			
Satd. Flow (perm)	147	5085	0	0	4806	0	1681	1493	1504	0	0
Right Turn on Red			Yes			Yes			Yes		Yes
Satd. Flow (RTOR)			145				57		57		
Link Speed (mph)	45		45				30		30		30
Link Distance (ft)	610		193				830		830		423
Travel Time (s)	9.2		2.9				18.9		18.9		9.6
Peak Hour Factor	0.99	0.99	0.99	0.92	0.92	0.92	0.80	0.80	0.80	0.92	0.92
Adj. Flow (vph)	349	1240	0	0	1115	637	386	0	482	0	0
Shared Lane Traffic (%)							22%		42%		
Lane Group Flow (vph)	349	1240	0	0	1752	0	301	287	280	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane											
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	2	9	15	15	9	15	9	15
Number of Detectors	1	2					1	2	1		
Detector Template	Left	Thru					Left	Thru	Right		
Leading Detector (ft)	20	100					20	100	20		
Trailing Detector (ft)	0	0					0	0	0		
Detector 1 Position(ft)	0	0					0	0	0		
Detector 1 Size(ft)	20	6					20	6	20		
Detector 1 Type	CI+EX	CI+EX					CI+EX	CI+EX	CI+EX		
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0					0.0	0.0	0.0		
Detector 1 Queue (s)	0.0	0.0					0.0	0.0	0.0		
Detector 1 Delay (s)	0.0	0.0					0.0	0.0	0.0		
Detector 2 Position(ft)	94						94		94		
Detector 2 Size(ft)	6						6		6		
Detector 2 Type	CI+EX						CI+EX		CI+EX		
Detector 2 Channel											
Detector 2 Extend (s)	0.0						0.0		0.0		
Turn Type	pn+pt						custom		Perm		
Protected Phases	1	6					3		3		
Permitted Phases	6						3		3		
Detector Phase	1	6					3		3		

Proposed Westwood Mixed Use Neighborhood 2013 Existing Conditions - PM Peak Hour
 12: Sheridan Drive & I-290 NB 4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	1.0	4.0			4.0		4.0	4.0	4.0		
Minimum Split (s)	6.2	33.9			27.8		29.0	29.0	29.0		
Total Split (s)	25.0	65.0	0.0	0.0	40.0	0.0	40.0	40.0	40.0	0.0	0.0
Total Split (%)	23.8%	61.9%	0.0%	0.0%	38.1%	0.0%	38.1%	38.1%	38.1%	0.0%	0.0%
Maximum Green (s)	20.7	59.1			34.2		34.8	34.8	34.8		
Yellow Time (s)	3.2	3.9			3.9		3.2	3.2	3.2		
All-Red Time (s)	1.1	2.0			1.9		2.0	2.0	2.0		
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.3	5.9	4.0	4.0	5.8	4.0	5.2	5.2	5.2	4.0	4.0
Lead/Lag	Lead	Lag			Lag						
Vehicle Extension (s)	2.0	3.0			3.0		2.0	2.0	2.0		
Recall Mode	None	C-Max			C-Max		None	None	None		
Walk Time (s)	7.0				7.0						
Flash Dont Walk (s)	21.0				15.0						
Pedestrian Calls (#/hr)	0				0						
Act Effct Green (s)	70.7	69.1			46.4		24.8	24.8	24.8		
Actuated g/C Ratio	0.67	0.66			0.44		0.24	0.24	0.24		
v/c Ratio	0.91	0.37			0.80		0.76	0.72	0.70		
Control Delay	55.4	9.3			28.8		48.9	39.1	37.7		
Queue Delay	0.0	0.0			0.0		0.0	0.0	0.0		
Total Delay	55.4	9.3			28.8		48.9	39.1	37.7		
LOS	E	A			C		D	D	D		
Approach Delay	19.5				28.8						
Approach LOS	B				C						



Proposed Westwood Mixed Use Neighborhood
 13: Sheridan Drive & Harlem Road

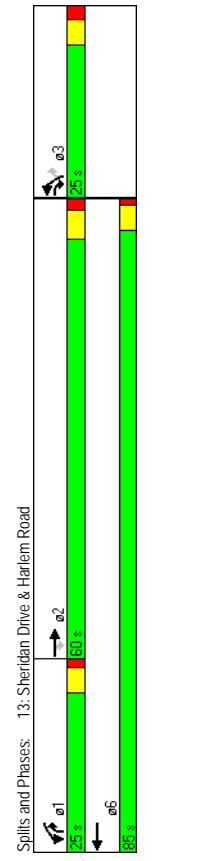
2013 Existing Conditions - PM Peak Hour
 4/24/2014

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔↔	↔↔	↔↔	↔↔
Volume (vph)	922	589	378	957	260
Ideal Flow (vphpl)	1900	1900	1900	1900	1900
Storage Length (ft)	0	215	140	0	0
Storage Lanes	1	1	2	2	2
Taper Length (ft)	230	100	100	25	25
Lane Util. Factor	0.95	1.00	0.97	0.95	0.88
Flt Protected		0.950		0.950	0.850
Satd. Flow (prot)	3539	1583	3433	3539	3433
Flt Permitted		0.950		0.950	
Satd. Flow (perm)	3539	1583	3433	3539	3433
Right Turn on Red	No				Yes
Satd. Flow (RTOR)					154
Link Speed (mph)	45		45	35	
Link Distance (ft)	314		610	338	
Travel Time (s)	4.8		9.2	6.6	
Peak Hour Factor	0.98	0.98	0.95	0.95	0.85
Adj. Flow (vph)	941	601	398	1007	306
Shared Lane Traffic (%)					767
Lane Group Flow (vph)	941	601	398	1007	306
Enter Blocked Intersection	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Right
Median Width(ft)	12		24	24	
Link Offset(ft)	0		0	0	0
Crosswalk Width(ft)	16		16	16	
Two way Left Turn Lane					
Headway Factor	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		15	9
Number of Detectors	2	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left
Leading Detector (ft)	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0
Detector 1 Size(ft)	6	20	20	6	20
Detector 1 Type	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 1 Channel					
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94	
Detector 2 Size(ft)	6			6	
Detector 2 Type	Ch+Ex			Ch+Ex	
Detector 2 Channel					
Detector 2 Extend (s)	0.0			0.0	
Turn Type		pm+ov	Prot		pm+ov
Protected Phases	2	3	1	6	3
Permitted Phases	2	3	1	6	3
Detector Phase	2	3	1	6	3

Proposed Westwood Mixed Use Neighborhood
 13: Sheridan Drive & Harlem Road

2013 Existing Conditions - PM Peak Hour
 4/24/2014

Lane Group	EBT	WBL	WBT	NBL	NBR
Switch Phase	↔	↔	↔	↔	↔
Minimum Initial (s)	1.0	1.0	1.0	4.0	1.0
Minimum Split (s)	30.5	6.2	5.3	32.3	6.2
Total Split (s)	60.0	25.0	25.0	85.0	25.0
Total Split (%)	54.5%	22.7%	22.7%	77.3%	22.7%
Maximum Green (s)	54.5	19.8	20.7	80.7	19.8
Yellow Time (s)	3.9	3.2	3.2	3.2	3.2
All-Red Time (s)	1.6	2.0	1.1	2.0	1.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.2	4.3	4.3	5.2
Lead/Lag	Lag	Lead	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0
Recall Mode	C-Max	None	None	None	None
Walk Time (s)	7.0		7.0		
Flash Dont Walk (s)	18.0		21.0		
Pedestrian Calls (#/hr)	0		0		
Act Effct Green (s)	63.3	83.1	17.4	86.2	14.3
Actuated g/C Ratio	0.58	0.76	0.16	0.78	0.13
v/c Ratio	0.46	0.50	0.73	0.36	0.69
Control Delay	15.5	7.5	52.3	4.3	53.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	15.5	7.5	52.3	4.3	53.5
LOS	B	A	D	A	D
Approach Delay	12.4			17.9	36.3
Approach LOS	B			B	D



Proposed Westwood Mixed Use Neighborhood 2013 Existing Conditions - PM Peak Hour
 14: I-290 SB & Harlem Road 4/24/2014

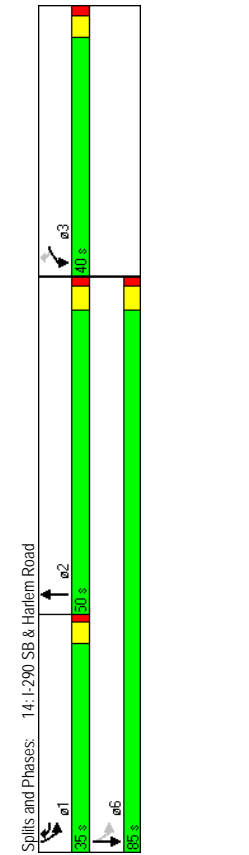
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (vph)	228	338	539	11	462	470
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	0	0	330	
Storage Lanes	1	1	0	0	1	
Taper Length (ft)	25	25	25	25	75	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Flt	0.850	0.997				
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	3529	0	1770	3539
Flt Permitted	0.950				0.188	
Satd. Flow (perm)	1770	1583	3529	0	350	3539
Right Turn on Red	Yes	Yes	Yes	Yes		
Satd. Flow (RTOR)	82	2				
Link Speed (mph)	30	35				35
Link Distance (ft)	333	250				456
Travel Time (s)	7.6	4.9				8.9
Peak Hour Factor	0.69	0.69	0.77	0.77	0.92	0.92
Adj. Flow (vph)	330	490	700	14	502	511
Shared Lane Traffic (%)						
Lane Group Flow (vph)	330	490	714	0	502	511
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12	12			12	
Link Offset(ft)	0	0			0	
Crosswalk Width(ft)	16	16			16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9			9	15
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (ft)	20	20	100		20	100
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	20	6		20	6
Detector 1 Type	CI+EX	CI+EX	CI+EX		CI+EX	CI+EX
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			CI+EX			CI+EX
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type		pm+ov			pm+pl	
Protected Phases	3	1	2		1	6
Permitted Phases		3			6	
Detector Phase	3	1	2		1	6

Proposed Westwood Mixed Use Neighborhood 2013 Existing Conditions - PM Peak Hour
 14: I-290 SB & Harlem Road 4/24/2014

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Switch Phase	↔	↔	↔	↔	↔	↔
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	22.0	9.2	30.6		9.2	21.0
Total Split (s)	40.0	35.0	50.0		35.0	85.0
Total Split (%)	32.0%	28.0%	40.0%		28.0%	68.0%
Maximum Green (s)	35.2	30.7	45.0		30.7	80.0
Yellow Time (s)	3.2	3.2	3.6		3.2	3.6
All-Red Time (s)	1.6	1.1	1.4		1.1	1.4
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.8	4.3	5.0		4.3	5.0
Lead/Lag	Lead	Lead	Lag		Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	Min		None	None
Walk Time (s)			10.0			
Flash Dont Walk (s)			15.0			
Pedestrian Calls (#/hr)			0			
Act Effct Green (s)	22.4	51.0	25.4		54.2	53.4
Actuated g/C Ratio	0.26	0.59	0.29		0.63	0.62
v/c Ratio	0.72	0.51	0.69		0.83	0.23
Control Delay	40.9	10.8	32.2		30.1	8.0
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	40.9	10.8	32.2		30.1	8.0
LOS	D	B	C		C	A
Approach Delay	22.9		32.2			18.9
Approach LOS	C		C			B

Intersection Summary

Area Type:	Other
Cycle Length:	125
Actuated Cycle Length:	86.3
Natural Cycle:	75
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.83
Intersection Signal Delay:	23.9
Intersection Capacity Utilization:	65.2%
Analysis Period (min):	15
Intersection LOS:	C
ICU Level of Service:	C



A5

**Level of Service Calculations:
Background Conditions**

Proposed Westwood Mixed Use Neighborhood 2023 Background Conditions - AM Peak Hour
 1: Maple Road & Millersport Hwy SB

4/24/2014



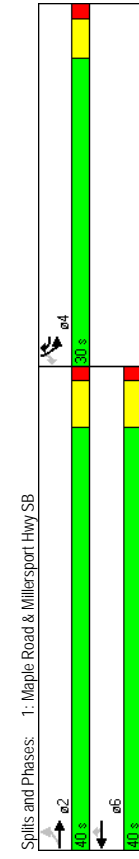
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	18	559	777	305	26	83
Volume (vph)	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	150	150	0	0	0	0
Storage Length (ft)	1	1	1	1	1	1
Storage Lanes	35	100	25	25	25	25
Taper Length (ft)	1.00	0.95	0.95	1.00	1.00	1.00
Lane Util. Factor	0.950	0.850	0.850	0.850	0.850	0.850
Flt Protected	1770	3539	3539	1583	1770	1583
Satd. Flow (prot)	0.345	1583	1583	1770	1583	1583
Flt Permitted	643	3539	3539	1583	1770	1583
Satd. Flow (perm)	45	45	45	30	30	30
Right Turn on Red	555	654	281	281	281	281
Satd. Flow (RTOR)	8.4	9.9	6.4	6.4	6.4	6.4
Link Speed (mph)	0.91	0.91	0.96	0.96	0.78	0.78
Link Distance (ft)	20	614	809	318	33	106
Travel Time (s)	20	614	809	318	33	106
Peak Hour Factor	20	614	809	318	33	106
Adj. Flow (vph)	20	614	809	318	33	106
Shared Lane Traffic (%)	No	No	No	No	No	No
Lane Group Flow (vph)	Left	Left	Right	Right	Left	Right
Enter Blocked Intersection	12	12	12	12	12	12
Lane Alignment	0	0	0	0	0	0
Median Width(ft)	16	16	16	16	16	16
Link Offset(ft)	1.00	1.00	1.00	1.00	1.00	1.00
Crosswalk Width(ft)	15	2	2	1	1	1
Two way Left Turn Lane	Left	Thru	Right	Left	Right	Right
Headway Factor	20	100	100	20	20	20
Turning Speed (mph)	0	0	0	0	0	0
Number of Detectors	20	6	6	20	20	20
Detector Template	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Leading Detector (ft)	0	0	0	0	0	0
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	20	6	6	20	20	20
Detector 1 Size(ft)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Type	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Channel	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94	94	94	94	94	94
Detector 2 Size(ft)	6	6	6	6	6	6
Detector 2 Type	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 2 Channel	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Extend (s)	2	6	6	4	4	4
Turn Type	Perm	pm+ov	pm+ov	Perm	Perm	Perm
Protected Phases	2	6	6	4	4	4
Permitted Phases	2	2	6	4	4	4
Detector Phase	2	2	6	4	4	4

Proposed Westwood Mixed Use Neighborhood 2023 Background Conditions - AM Peak Hour
 1: Maple Road & Millersport Hwy SB

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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Switch Phase	4.0	4.0	4.0	1.0	1.0	1.0
Minimum Initial (s)	9.1	9.1	9.1	6.2	6.2	6.2
Minimum Split (s)	40.0	40.0	40.0	30.0	30.0	30.0
Total Split (s)	57.1%	57.1%	57.1%	42.9%	42.9%	42.9%
Total Split (%)	34.9	34.9	34.9	25.4	25.4	25.4
Maximum Green (s)	3.9	3.9	3.9	3.2	3.2	3.2
Yellow Time (s)	1.2	1.2	1.2	1.4	1.4	1.4
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time (s)	5.1	5.1	5.1	4.6	4.6	4.6
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lead-Lag Optimize?	None	None	None	None	None	None
Vehicle Extension (s)	52.8	52.8	70.0	7.5	7.5	7.5
Recall Mode	0.75	0.75	0.75	1.00	1.00	1.00
Act Effct Green (s)	0.04	0.23	0.30	0.20	0.18	0.40
Actuated g/C Ratio	2.9	3.0	5.2	0.3	29.7	11.4
vic Ratio	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay	2.9	3.0	5.2	0.3	29.7	11.4
Queue Delay	2.9	3.0	5.2	0.3	29.7	11.4
Total Delay	A	A	A	A	C	B
LOS	A	A	A	A	C	B
Approach Delay	3.0	3.8	3.8	15.8	15.8	15.8
Approach LOS	A	A	A	B	B	B
Intersection Summary	Other					
Area Type:	Other					
Cycle Length:	70					
Actuated Cycle Length:	70					
Offset:	5 (7%), Referenced to phase 2:EBTL and 6:WBT. Start of Green					
Natural Cycle:	40					
Control Type:	Actuated-Coordinated					
Maximum v/c Ratio:	0.40					
Intersection Signal Delay:	4.4					
Intersection LOS:	A					
ICU Level of Service:	A					
Intersection Capacity Utilization:	34.7%					
Analysis Period (min):	15					



Splits and Phases: 1: Maple Road & Millersport Hwy SB

Proposed Westwood Mixed Use Neighborhood 2023 Background Conditions - AM Peak Hour
 2: Maple Road & Millersport Hwy NB

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	42	542	0	0	935	52	147	1	463	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	0	0	0	0	0	0	0	0	0
Storage Lanes	1	0	0	0	0	1	0	0	0	0	0
Taper Length (ft)	50	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Flt Permitted	0.950				0.992		0.950		0.850		
Satd. Flow (prot)	1770	3539	0	0	3511	0	1770	1583	0	0	0
Flt Permitted	0.214				0.950		0.950				
Right Turn on Red	399	3539	0	0	3511	0	1770	1583	0	0	0
Satd. Flow (RTOR)			Yes		Yes		Yes	Yes			Yes
Link Speed (mph)		45			11			204			30
Link Distance (ft)		654			1770			319			263
Travel Time (s)		9.9			26.8			7.3			6.0
Peak Hour Factor	0.85	0.85	0.85	0.93	0.93	0.93	0.93	0.93	0.93	0.92	0.92
Adj. Flow (vph)	49	638	0	0	1005	56	158	1	498	0	0
Shared Lane Traffic (%)											
Lane Group Flow (vph)	49	638	0	0	1061	0	158	499	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Left	Right	Left	Right
Median Width(ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9	15	9	15	9	15
Number of Detectors	1	2			2		1	2			2
Detector Template	Left	Thru			Thru		Left	Thru			Thru
Leading Detector (ft)	20	100			100		20	100			100
Trailing Detector (ft)	0	0			0		0	0			0
Detector 1 Position(ft)	0	0			0		0	0			0
Detector 1 Size(ft)	20	6			6		20	6			6
Detector 1 Type	CI+EX	CI+EX			CI+EX		CI+EX	CI+EX			CI+EX
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0			0.0
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0			0.0
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0			0.0
Detector 2 Position(ft)	94	94			94		94	94			94
Detector 2 Size(ft)	6	6			6		6	6			6
Detector 2 Type	CI+EX	CI+EX			CI+EX		CI+EX	CI+EX			CI+EX
Detector 2 Channel											
Detector 2 Extend (s)	0.0	0.0			0.0		0.0	0.0			0.0
Turn Type	Perm				Perm		Perm	Perm			Perm
Protected Phases	2	2			6		6	8			8
Permitted Phases	2	2			6		6	8			8
Detector Phase	2	2			6		6	8			8

Lanes, Volumes, Timings
 SRF & Associates
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Proposed Westwood Mixed Use Neighborhood 2023 Background Conditions - AM Peak Hour
 2: Maple Road & Millersport Hwy NB

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	1.0	1.0			4.0		1.0	1.0		1.0	1.0
Minimum Split (s)	6.1	6.1			9.1		6.2	6.2		6.2	6.2
Total Split (s)	40.0	40.0	0.0	0.0	40.0	0.0	30.0	30.0	0.0	0.0	0.0
Total Split (%)	57.1%	57.1%	0.0%	0.0%	57.1%	0.0%	42.9%	42.9%	0.0%	0.0%	0.0%
Maximum Green (s)	34.9	34.9			34.9		25.4	25.4		25.4	25.4
Yellow Time (s)	3.9	3.9			3.9		3.2	3.2		3.2	3.2
All-Red Time (s)	1.2	1.2			1.2		1.4	1.4		1.4	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	4.0	4.0	5.1	4.0	4.6	4.6	4.0	4.0	4.0
LeadLag											
Lead-Lag Optimize?											
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0
Recall Mode	C-Min	C-Min			C-Min		None	None		None	None
Act Effct Green (s)	40.3	40.3			40.3		20.0	20.0		20.0	20.0
Actuated g/C Ratio	0.58	0.58			0.58		0.29	0.29		0.29	0.29
v/c Ratio	0.21	0.31			0.52		0.31	0.84		0.84	0.84
Control Delay	13.4	9.5			11.3		19.6	25.9		25.9	25.9
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0
Total Delay	13.4	9.5			11.3		19.6	25.9		25.9	25.9
LOS	B	A			B		B	C		C	C
Approach Delay											
Approach LOS	A	A			B		B	C		C	C

Intersection Summary

Area Type:	Other
Cycle Length:	70
Actuated Cycle Length:	70
Offset:	5 (7%), Referenced to phase 2:EBTL and 6:WBT, Start of Green
Natural Cycle:	45
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.84
Intersection Signal Delay:	14.4
Intersection Capacity Utilization:	71.7%
Analysis Period (min):	15
ICU Level of Service:	C

Splits and Phases: 2: Maple Road & Millersport Hwy NB

 SRF & Associates
 Synchro 7 - Report Page 4

Proposed Westwood Mixed Use Neighborhood 2023 Background Conditions - AM Peak Hour
 3: Maple Road & Maplemere Road

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	21	870	46	12	978	28	43	3	16	34	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	70	0	0	0	0	0	0	0	0
Storage Lanes	1	0	1	0	0	0	0	0	0	0	0
Taper Length (ft)	50	25	50	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Frt	0.993			0.996			0.965		0.967		0.957
Flt Permitted	0.950		0.950				0.967		0.967		0.967
Satd. Flow (prot)	1770	3514	0	1770	3525	0	1738	0	1738	0	1724
Satd. Flow (perm)	0.226		0.240		0.739		0.733		0.733		0.733
Right Turn on Red	421	3514	0	447	3525	0	1328	0	1307	0	1307
Right (RTOR)	Yes		Yes		Yes		Yes		Yes		Yes
Satd. Flow (RTOR)	11		6		25		25		28		28
Link Speed (mph)	45		45		30		30		30		30
Link Distance (ft)	1770		1106		378		402		402		402
Travel Time (s)	26.8		16.8		8.6		9.1		9.1		9.1
Peak Hour Factor	0.86	0.86	0.86	0.91	0.91	0.91	0.60	0.60	0.60	0.58	0.58
Adj. Flow (vph)	24	1012	53	13	1075	31	72	5	27	59	28
Shared Lane Traffic (%)											
Lane Group Flow (vph)	24	1065	0	13	1106	0	104	0	104	0	87
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	12	0	0	12	0	0	0	0	0	0	0
Link Offset(ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane	Yes		Yes		Yes		Yes		Yes		Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9	15	9	15	9	15
Number of Detectors	1	2	1	2	1	2	1	2	1	2	2
Detector Template	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Thru
Leading Detector (ft)	20	100	20	100	20	100	20	100	20	100	100
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	6	20	6	20	6	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94		94		94		94		94		94
Detector 2 Size(ft)	6		6		6		6		6		6
Detector 2 Type	Cl+Ex		Cl+Ex		Cl+Ex		Cl+Ex		Cl+Ex		Cl+Ex
Detector 2 Channel											
Detector 2 Extend (s)	0.0		0.0		0.0		0.0		0.0		0.0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm
Protected Phases	2		6		6		8		8		4
Permitted Phases	2		6		6		8		8		4
Detector Phase	2		6		6		8		8		4

Proposed Westwood Mixed Use Neighborhood 2023 Background Conditions - AM Peak Hour
 3: Maple Road & Maplemere Road

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	4.0		4.0		4.0		4.0		4.0		4.0
Minimum Split (s)	9.0		9.0		9.0		27.0		27.0		27.0
Total Split (s)	46.0		46.0		46.0		29.0		29.0		29.0
Total Split (%)	61.3%		61.3%		61.3%		38.7%		38.7%		38.7%
Maximum Green (s)	41.0		41.0		41.0		24.0		24.0		24.0
Yellow Time (s)	3.0		3.0		3.0		3.0		3.0		3.0
All-Red Time (s)	2.0		2.0		2.0		2.0		2.0		2.0
Lost Time Adjust (s)	0.0		0.0		0.0		0.0		0.0		0.0
Total Lost Time (s)	5.0		5.0		5.0		5.0		5.0		5.0
Lead-Lag Optimize?											
Vehicle Extension (s)	3.0		3.0		3.0		3.0		3.0		3.0
Recall Mode	Min		Min		Min		None		None		None
Walk Time (s)	7.0		7.0		7.0		7.0		7.0		7.0
Flash Dont Walk (s)	15.0		15.0		15.0		15.0		15.0		15.0
Pedestrian Calls (#/hr)											
Act Effct Green (s)	25.9		25.9		25.9		8.3		8.3		8.2
Actuated g/C Ratio	0.64		0.64		0.64		0.21		0.21		0.20
v/c Ratio	0.09		0.47		0.05		0.49		0.35		0.30
Control Delay	6.0		6.4		5.4		6.6		15.7		14.1
Queue Delay	0.0		0.0		0.0		0.0		0.0		0.0
Total Delay	6.0		6.4		5.4		6.6		15.7		14.1
LOS	A		A		A		B		B		B
Approach Delay	6.4		6.6		6.6		15.7		15.7		14.1
Approach LOS	A		A		A		B		B		B

Intersection Summary

Area Type:		Other
Cycle Length:	75	
Actuated Cycle Length:	40.3	
Natural Cycle:	55	
Control Type:	Actuated-Uncoordinated	
Maximum v/c Ratio:	0.49	
Intersection Signal Delay:	7.2	
Intersection Capacity Utilization:	40.4%	
Analysis Period (min):	15	
ICU Level of Service:	A	



Proposed Westwood Mixed Use Neighborhood 2023 Background Conditions - AM Peak Hour
4/24/2014
4: Maple Road & Donna Lea Blvd

	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔↔	↔↔	↔↔	↔↔	↔↔
Volume (vph)	915	6	13	993	24	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	50	0	0	0	0
Storage Lanes	0	1	0	1	0	0
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Flt Protected	0.999		0.950		0.986	
Flt Permitted			0.950		0.986	
Satd. Flow (prot)	3536	0	1770	3539	1660	0
Satd. Flow (perm)	3536	0	1770	3539	1660	0
Link Speed (mph)	45		45		30	
Link Distance (ft)	1106		1928		355	
Travel Time (s)	16.8		29.2		8.1	
Peak Hour Factor	0.79	0.79	0.87	0.87	0.76	0.76
Adj. Flow (vph)	1158	8	15	1141	32	80
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1166	0	15	1141	112	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12		12		12	
Link Offset(ft)	0		0		0	
Crosswalk Width(ft)	16		16		16	
Two way Left Turn Lane	Yes		Yes		Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15	15	15	15	9
Sign Control	Free	Free	Free	Free	Stop	Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	39.2%					
Analysis Period (min)	15					
ICU Level of Service:	A					

Proposed Westwood Mixed Use Neighborhood 2023 Background Conditions - AM Peak Hour
4/24/2014
4: Maple Road & Donna Lea Blvd

	EBT	EBR	WBL	WBT	NBL	NBR
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔↔	↔↔	↔↔	↔↔	↔↔
Volume (veh/h)	915	6	13	993	24	61
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%		0%		0%	
Peak Hour Factor	0.79	0.79	0.87	0.87	0.76	0.76
Hourly flow rate (vph)	1158	8	15	1141	32	80
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLT		TWLT		2	
Median storage (veh)	2		1106		2	
Upstream signal (ft)						
pX, platoon unblocked			0.87		0.87	0.87
vC, conflicting volume			1166		1763	583
vC1, stage 1 conf vol					1162	
vC2, stage 2 conf vol					601	
vCu, unblocked vol			903		1585	237
IC, single (s)			4.1		6.8	6.9
IC, 2 stage (s)					5.8	
IF (s)			2.2		3.5	3.3
p0 queue free %			98		88	88
cM capacity (veh/h)			655		269	669
Direction, Lane #						
Volume Total	772	394	15	571	571	112
Volume Left	0	0	15	0	0	32
Volume Right	0	8	0	0	0	80
cSH	1700	1700	655	1700	1700	471
Volume to Capacity	0.45	0.23	0.02	0.34	0.34	0.24
Queue Length 95th (ft)	0	0	2	0	0	23
Control Delay (s)	0.0	0.0	10.6	0.0	0.0	15.0
Lane LOS			B		C	C
Approach Delay (s)	0.0		0.1		15.0	
Approach LOS			C		C	
Intersection Summary						
Average Delay	0.8					
Intersection Capacity Utilization	39.2%					
ICU Level of Service	A					
Analysis Period (min)	15					

Proposed Westwood Mixed Use Neighborhood 2023 Background Conditions - AM Peak Hour
 5: Maple Road & Audubon Golf Club

4/24/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	1	968	4	1	1013	2	13	0	3	1	0
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vpph)	100	0	50	0	0	0	0	0	0	0	0
Storage Length (ft)	1	0	1	0	0	0	0	0	0	0	0
Storage Lanes	25	25	25	25	25	25	25	25	25	25	25
Taper Length (ft)	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.999						0.976				
Flt Protected	0.950		0.950		0.960		0.960		0.950		0.950
Satd. Flow (prot)	1770	3536	0	1770	3539	0	1745	0	1745	0	1770
Flt Permitted	0.950		0.950		0.960		0.960		0.950		0.950
Satd. Flow (perm)	1770	3536	0	1770	3539	0	1745	0	1745	0	1770
Link Speed (mph)	45	45	45	45	45	45	30	30	30	30	30
Link Distance (ft)	446	446	446	446	446	446	469	469	469	469	469
Travel Time (s)	6.8	6.8	6.8	6.8	6.8	6.8	10.7	10.7	10.7	10.7	10.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	1052	4	1	1101	2	14	0	3	1	0
Shared Lane Traffic (%)											
Lane Group Flow (vph)	1	1056	0	1	1103	0	0	17	0	0	1
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Right
Median Width (ft)	12	12	12	12	12	12	0	0	0	0	0
Link Offset (ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width (ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane	Yes		Yes		Yes		Yes		Yes		Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9	15	9	15	9	15
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	38.1%
Analysis Period (min)	15

Proposed Westwood Mixed Use Neighborhood 2023 Background Conditions - AM Peak Hour
 5: Maple Road & Audubon Golf Club

4/24/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	1	968	4	1	1013	2	13	0	3	1	0
Volume (veh/h)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	1052	4	1	1101	2	14	0	3	1	0
Pedestrians											
Lane Width (ft)											
Walking Speed (ft/s)											
Percent Blockage											
Right turn flare (veh)											
Median type	TWLT			TWLT							
Median storage (veh)	2			2							
Upstream signal (ft)											
pX, platoon unblocked											
vC, conflicting volume	1103		1057				1609	2162	528	1636	2163
vC1, stage 1 conf vol							1057	1057	1104	1104	1104
vC2, stage 2 conf vol							553	1105	552	1089	1089
vCu, unblocked vol	1103		1057				1609	2162	528	1636	2163
IC, single (s)	4.1		4.1				7.5	6.5	6.9	7.5	6.5
IC, 2 stage (s)							6.5	5.5	5.5	6.5	5.5
IF (s)	2.2		2.2				3.5	4.0	3.3	3.5	4.0
p0 queue free %	100		100				93	100	99	99	100
cM capacity (veh/h)	629		655				217	204	495	205	204

Direction, Lane #	
EB 1	701
EB 2	355
EB 3	1
WB 1	1
WB 2	734
WB 3	369
NB 1	17
SB 1	1

Volume Total	
Volume Left	0
Volume Right	0
cSH	629
Volume to Capacity	0.00
Queue Length 95th (ft)	0
Control Delay (s)	10.7
Lane LOS	B
Approach Delay (s)	0.0
Approach LOS	C

Intersection Summary	
Average Delay	0.2
Intersection Capacity Utilization	38.1%
Analysis Period (min)	15
ICU Level of Service	A

Proposed Westwood Mixed Use Neighborhood 2023 Background Conditions - AM Peak Hour
6: Maple Road & North Forest Road

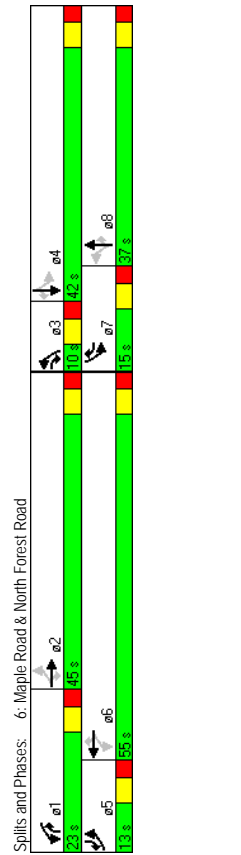
4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	79	788	77	249	752	90	90	229	184	123	355
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	415	220	315	150	220	250	250	250	250	250	250
Storage Length (ft)	1	1	1	1	1	1	1	1	1	1	1
Taper Length (ft)	90	115	60	25	95	25	90	25	90	25	25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.950		0.950		0.850		0.850		0.850		0.850
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1863	1583	1770	1863
Flt Permitted	0.292		0.112		0.223		0.358		0.358		0.358
Satd. Flow (perm)	544	3539	1583	209	3539	1583	415	1863	1583	667	1863
Right Turn on Red	Yes		Yes		No		Yes		Yes		Yes
Satd. Flow (RTOR)	86		86				61		61		99
Link Speed (mph)	45		45		45		35		35		35
Link Distance (ft)	1705		820		529		608		608		608
Travel Time (s)	25.8		12.4		10.3		11.8		11.8		11.8
Peak Hour Factor	0.90	0.90	0.90	0.95	0.95	0.95	0.90	0.90	0.90	0.80	0.80
Adj. Flow (vph)	88	876	86	262	792	95	100	254	204	154	444
Shared Lane Traffic (%)	88	876	86	262	792	95	100	254	204	154	444
Lane Group Flow (vph)	No	No	No	No	No	No	No	No	No	No	No
Enter Blocked Intersection	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	12		12		12		12		12		12
Link Offset(ft)	0		0		0		0		0		0
Crosswalk Width(ft)	16		16		16		16		16		16
Two way Left Turn Lane	Yes		Yes		Yes		Yes		Yes		Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	2	1	2	1	2	1	15	15
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru
Leading Detector (ft)	20	100	20	100	20	100	20	100	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6
Detector 1 Type	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94		94		94		94		94		94
Detector 2 Size(ft)	6		6		6		6		6		6
Detector 2 Type	Ch+Ex		Ch+Ex		Ch+Ex		Ch+Ex		Ch+Ex		Ch+Ex
Detector 2 Channel											
Detector 2 Extend (s)	0.0		0.0		0.0		0.0		0.0		0.0
Turn Type	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+ov
Protected Phases	5	2	3	1	6	7	3	8	1	7	4
Permitted Phases	2	2	2	6	6	8	8	8	8	4	4
Detector Phase	5	2	3	1	6	7	3	8	1	7	4

Proposed Westwood Mixed Use Neighborhood 2023 Background Conditions - AM Peak Hour
6: Maple Road & North Forest Road

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase	1.0	4.0	1.0	1.0	4.0	1.0	1.0	4.0	1.0	1.0	4.0
Minimum Initial (s)	7.0	35.0	7.0	7.0	35.0	7.0	7.0	35.0	7.0	7.0	35.0
Minimum Split (s)	13.0	45.0	10.0	23.0	55.0	15.0	10.0	37.0	23.0	15.0	42.0
Total Split (s)	10.8%	37.5%	8.3%	19.2%	45.8%	12.5%	8.3%	30.8%	19.2%	12.5%	35.0%
Total Split (%)	7.0	39.0	4.0	17.0	49.0	9.0	4.0	31.0	17.0	9.0	36.0
Maximum Green (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Yellow Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Total Lost Time (s)	Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lead	Lag	Lag	Lead	Lag
Lead/Lag	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Lead-Lag Optimize?	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Vehicle Extension (s)	None	None	None	None	None	None	None	None	None	None	None
Recall Mode	7.0		7.0		7.0		7.0		7.0		7.0
Walk Time (s)	22.0		22.0		22.0		22.0		22.0		22.0
Flash Dont Walk (s)	0		0		0		0		0		0
Pedestrian Calls (#/hr)	39.0	32.1	42.3	52.5	39.9	54.9	28.6	24.5	45.5	38.3	29.4
Act Effct Green (s)	0.37	0.31	0.40	0.50	0.38	0.52	0.27	0.23	0.43	0.37	0.28
Actuated G/C Ratio	0.31	0.81	0.12	0.81	0.59	0.11	0.60	0.58	0.28	0.46	0.85
v/c Ratio	18.6	41.0	5.2	43.8	28.1	13.8	43.5	42.7	14.7	28.6	53.2
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	18.6	41.0	5.2	43.8	28.1	13.8	43.5	42.7	14.7	28.6	53.2
Total Delay	18.6	41.0	5.2	43.8	28.1	13.8	43.5	42.7	14.7	28.6	53.2
LOS	B	D	A	D	C	B	D	D	B	C	D
Approach Delay	36.2		30.5		30.5		32.6		38.3		38.3
Approach LOS	D		C		C		C		D		D



Proposed Westwood Mixed Use Neighborhood 2023 Background Conditions - AM Peak Hour
 7: Sheridan Drive & Mill Street

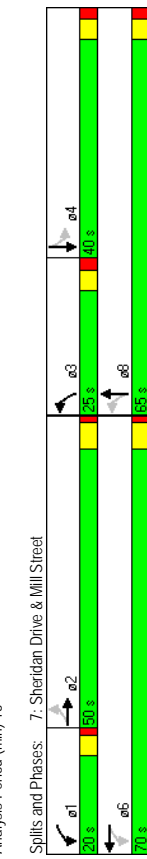
4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	5	1271	122	220	966	9	99	21	125	30	146
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	100	0	150	0	40	0	75	0	75	0	0
Storage Length (ft)	1	0	1	0	1	0	1	0	1	0	0
Storage Lanes	65	25	60	25	25	25	25	25	25	25	25
Taper Length (ft)	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.987		0.999		0.872		0.950		0.950		0.986
Flt Protected	0.950		0.950		0.950		0.950		0.950		0.950
Satd. Flow (prot)	1770	3493	0	1770	3536	0	1770	1624	0	1770	1837
Flt Permitted	0.261		0.080		0.235		0.598		0.598		0.598
Satd. Flow (perm)	486	3493	0	149	3536	0	438	1624	0	1114	1837
Right Turn on Red			No		Yes		No		No		Yes
Satd. Flow (RTOR)			1								4
Link Speed (mph)	45		45		45		30		30		30
Link Distance (ft)	2782		977		838		362		362		82
Travel Time (s)	42.2		14.8		19.0		8.2		8.2		8.2
Peak Hour Factor	0.86	0.86	0.86	0.89	0.89	0.89	0.56	0.56	0.56	0.61	0.61
Adj. Flow (vph)	6	1478	142	247	1085	10	177	38	223	49	239
Shared Lane Traffic (%)											25
Lane Group Flow (vph)	6	1620	0	247	1095	0	177	261	0	49	264
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset(ft)	0		0		0		0		0		0
Crosswalk Width(ft)	16		16		16		16		16		16
Two way Left Turn Lane	Yes		Yes		Yes		Yes		Yes		Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	1	2	9	15	1	2	9	15
Number of Detectors	1	2	1	2	1	2	1	2	1	2	1
Detector Template	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left
Leading Detector (ft)	20	100	20	100	20	100	20	100	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	6	20	6	20	6	20	6	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94		94		94		94		94		94
Detector 2 Size(ft)	6		6		6		6		6		6
Detector 2 Type	CI+EX		CI+EX		CI+EX		CI+EX		CI+EX		CI+EX
Detector 2 Channel											
Detector 2 Extend (s)	0.0		0.0		0.0		0.0		0.0		0.0
Turn Type	Perm		pm+pt		pm+pt		Perm		Perm		Perm
Protected Phases	2		6		6		3		8		4
Permitted Phases	2		6		6		8		8		4
Detector Phase	2		1		6		3		8		4

Proposed Westwood Mixed Use Neighborhood 2023 Background Conditions - AM Peak Hour
 7: Sheridan Drive & Mill Street

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase	4.0	4.0	1.0	4.0	4.0	1.0	4.0	4.0	4.0	4.0	4.0
Minimum Initial (s)	28.3	28.3	6.2	28.3	6.2	28.3	6.2	34.2	34.2	34.2	34.2
Minimum Split (s)	50.0	50.0	0.0	20.0	70.0	0.0	25.0	65.0	0.0	40.0	40.0
Total Split (s)	37.0%	37.0%	0.0%	14.8%	51.9%	0.0%	18.5%	48.1%	0.0%	29.6%	29.6%
Total Split (%)	44.5	44.5	15.7	64.5	19.8	59.8	34.8	34.8	34.8	34.8	34.8
Maximum Green (s)	4.3	4.3	3.2	4.3	3.2	4.3	3.2	3.2	3.2	3.2	3.2
Yellow Time (s)	1.2	1.2	1.1	1.2	1.1	1.2	2.0	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	5.5	5.5	4.0	4.3	5.5	4.0	5.2	5.2	4.0	5.2	5.2
Total Lost Time (s)	Lag	Lag	Lead	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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
Recall Mode	Max	Max	None	Max	None	Max	None	None	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0	15.0	15.0	15.0	15.0	22.0	22.0	22.0	22.0	22.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0	0	0	0
Act Effct Green (s)	45.4	45.4	66.1	64.9	40.5	40.5	40.5	40.5	21.6	21.6	21.6
Actuated g/C Ratio	0.39	0.39	0.57	0.56	0.35	0.35	0.35	0.35	0.19	0.19	0.19
v/c Ratio	0.03	1.19	0.83	0.55	0.57	0.46	0.24	0.46	0.24	0.24	0.24
Control Delay	27.4	125.3	52.8	19.1	34.1	31.6	43.4	59.6	43.4	59.6	59.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.4	125.3	52.8	19.1	34.1	31.6	43.4	59.6	43.4	59.6	59.6
LOS	C	F	D	B	C	C	C	C	D	D	E
Approach Delay	125.0	F	25.3	C	57.1	C	57.1	C	57.1	C	57.1
Approach LOS	F		C		F		C		F		C



Proposed Westwood Mixed Use Neighborhood 2023 Background Conditions - AM Peak Hour
8: Sheridan Drive & North Forest Road

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	90	1286	197	181	1015	19	205	340	23	11	437
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	405	170	260	0	180	0	265	180	200	200	200
Storage Lanes	1	1	1	0	1	0	1	1	1	1	1
Taper Length (ft)	200	25	200	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95
Flt Protected	0.950		0.950		0.950		0.950		0.950		0.850
Satd. Flow (prot)	1770	3539	1583	1770	3529	0	1770	1863	1583	1770	3539
Flt Permitted	0.132		0.067		0.201		0.477		0.477		0.477
Satd. Flow (perm)	246	3539	1583	125	3529	0	374	1863	1583	889	3539
Right Turn on Red		Yes		Yes		Yes		Yes		Yes	
Satd. Flow (RTOR)		96		1		1		26		26	
Link Speed (mph)		45		45		45		40		40	
Link Distance (ft)		1668		2219		354		547		354	
Travel Time (s)		25.3		33.6		6.9		9.3		6.9	
Peak Hour Factor	0.95	0.95	0.95	0.92	0.92	0.92	0.90	0.90	0.90	0.84	0.84
Adj. Flow (vph)	95	1354	207	197	1103	21	228	378	26	13	520
Shared Lane Traffic (%)											
Lane Group Flow (vph)	95	1354	207	197	1124	0	228	378	26	13	520
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Right	Right
Median Width (ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset (ft)	16		16		16		16		16		16
Two way Left Turn Lane	Yes		Yes		Yes		Yes		Yes		Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	1	2	9	15	2	9	15	9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Right
Leading Detector (ft)	20	100	20	20	100	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size (ft)	20	6	20	20	6	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position (ft)	94		94		94		94		94		94
Detector 2 Size (ft)	6		6		6		6		6		6
Detector 2 Type	Cl+Ex		Cl+Ex		Cl+Ex		Cl+Ex		Cl+Ex		Cl+Ex
Detector 2 Channel											
Detector 2 Extend (s)	0.0		0.0		0.0		0.0		0.0		0.0
Turn Type	pm+pt		Perm		pm+pt		Perm		pm+pt		Perm
Protected Phases	1	6	6	2	2	7	4	4	3	8	8
Permitted Phases	6	6	6	2	2	7	4	4	4	8	8
Detector Phase	1	6	6	5	2	7	4	4	3	8	8

Proposed Westwood Mixed Use Neighborhood 2023 Background Conditions - AM Peak Hour
8: Sheridan Drive & North Forest Road

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.3	27.9	27.9	8.3	27.9	8.3	27.9	21.0	27.2	27.2	8.3
Total Split (s)	30.0	60.0	60.0	20.0	50.0	0.0	25.0	40.0	40.0	20.0	35.0
Total Split (%)	21.4%	42.9%	42.9%	14.3%	35.7%	0.0%	17.9%	28.6%	28.6%	14.3%	25.0%
Maximum Green (s)	25.7	54.9	54.9	15.7	44.9		20.7	34.9	34.9	15.7	29.9
Yellow Time (s)	3.2	3.9	3.9	3.2	3.9		3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.1	1.2	1.1	1.2	1.1		1.1	1.9	1.9	1.1	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.3	5.1	5.1	4.3	5.1		4.3	5.1	5.1	4.3	5.1
Lead/Lag	Lead	Lag	Lead	Lag	Lead		Lag	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	None	Max	None		None	None	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0	15.0	15.0	15.0		15.0	15.0	15.0	15.0	15.0
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0	0	0	0
Act Effct Green (s)	65.1	55.2	55.2	73.9	60.1		49.0	44.0	44.0	32.5	25.5
Actuated G/C Ratio	0.49	0.42	0.42	0.56	0.46		0.37	0.33	0.33	0.25	0.19
v/c Ratio	0.42	0.91	0.29	0.81	0.70		0.68	0.61	0.05	0.05	0.76
Control Delay	21.0	47.8	15.7	57.2	33.0		40.8	42.7	11.7	27.5	58.6
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	21.0	47.8	15.7	57.2	33.0		40.8	42.7	11.7	27.5	58.6
LOS	C	D	B	E	C		D	D	B	C	E
Approach Delay	42.3		42.3		36.6		40.8		40.8		38.9
Approach LOS	D		D		D		D		D		D

Intersection Summary

Area Type: Other

Cycle Length: 140

Actuated Cycle Length: 132

Natural Cycle: 105

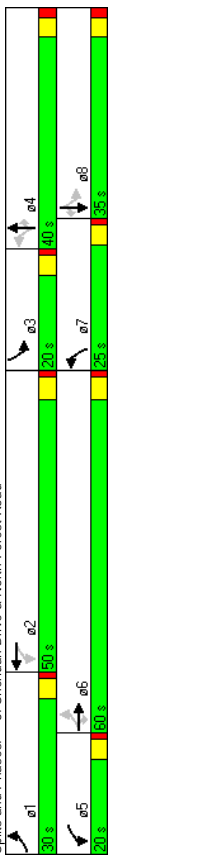
Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.91

Intersection Signal Delay: 39.7

Intersection Capacity Utilization 84.7%

Analysis Period (min) 15



Proposed Westwood Mixed Use Neighborhood 2023 Background Conditions - AM Peak Hour
 9: Country Club Drive & North Forest Road

4/24/2014



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group	W					
Lane Configurations	1	1	8	4	731	5
Volume (vph)	1900	1900	1900	1900	1900	1900
Ideal Flow (vpph)	1.00	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.932				0.999	
Flt Protected	0.976				0.999	
Satd. Flow (prot)	1694	0	0	1861	1861	0
Flt Permitted	0.976				0.999	
Satd. Flow (perm)	1694	0	0	1861	1861	0
Link Speed (mph)	30				35	
Link Distance (ft)	217				310	192
Travel Time (s)	4.9				6.0	3.7
Peak Hour Factor	0.50	0.50	0.83	0.83	0.94	0.94
Adj. Flow (vph)	2	2	10	533	778	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	4	0	0	543	783	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12				0	0
Link Offset(ft)	0				0	0
Crosswalk Width(ft)	16				16	16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop		Free	Free	Free	Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	48.8%					
Analysis Period (min)	15					
ICU Level of Service	A					

Proposed Westwood Mixed Use Neighborhood 2023 Background Conditions - AM Peak Hour
 9: Country Club Drive & North Forest Road

4/24/2014



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W					
Volume (veh/h)	1	1	8	4	731	5
Sign Control	Stop		Free	Free	Free	Free
Grade	0%				0%	0%
Peak Hour Factor	0.50	0.50	0.83	0.83	0.94	0.94
Hourly flow rate (vph)	2	2	10	533	778	5
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)					664	
pX, platoon unblocked	0.82					
vC, conflicting volume	1332	780	783			
vC1, stage 1 cont vol						
vC2, stage 2 cont vol						
vCu, unblocked vol	1296	780	783			
IC, single (s)	6.4	6.2	4.1			
IC, 2 stage (s)						
IF (s)	3.5	3.3	2.2			
p0 queue free %	99	99	99			
cM capacity (veh/h)	145	395	835			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	4	542	783			
Volume Left	2	10	0			
Volume Right	2	0	5			
cSH	213	835	1700			
Volume to Capacity	0.02	0.01	0.46			
Queue Length 95th (ft)	1	1	0			
Control Delay (s)	22.3	0.3	0.0			
Lane LOS	C	A				
Approach Delay (s)	22.3	0.3	0.0			
Approach LOS	C					
Intersection Summary						
Average Delay	0.2					
Intersection Capacity Utilization	48.8%					
ICU Level of Service	A					
Analysis Period (min)	15					

Proposed Westwood Mixed Use Neighborhood 2023 Background Conditions - AM Peak Hour
10: Sheridan Drive & Fenwick Road

4/24/2014

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔	↔↔	↔↔	↔	↔
Volume (veh/h)	1564	6	4	1500	16	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	75	0	0	0	0
Storage Lanes	0	1	1	0	0	0
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Flt Protected	0.999		0.950	0.969		
Satd. Flow (prot)	3536	0	1770	3539	1717	0
Flt Permitted	0.950		0.950	0.969		
Satd. Flow (perm)	3536	0	1770	3539	1717	0
Link Speed (mph)	45		45	30		
Link Distance (ft)	635		1668	278		
Travel Time (s)	9.6		25.3	6.3		
Peak Hour Factor	0.88	0.88	0.90	0.90	0.69	0.69
Adj. Flow (vph)	1777	7	4	1667	23	13
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1784	0	4	1667	36	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12		12	12		12
Link Offset(ft)	0		0	0		0
Crosswalk Width(ft)	16		16	16		16
Two way Left Turn Lane	Yes		Yes			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15	15	15	15	9
Sign Control	Free	Free	Free	Free	Stop	Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	53.4%					
Analysis Period (min)	15					
ICU Level of Service:	A					

Proposed Westwood Mixed Use Neighborhood 2023 Background Conditions - AM Peak Hour
10: Sheridan Drive & Fenwick Road

4/24/2014

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔	↔↔	↔↔	↔	↔
Volume (veh/h)	1564	6	4	1500	16	9
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%		0%	0%	0%	0%
Peak Hour Factor	0.88	0.88	0.90	0.90	0.69	0.69
Hourly flow rate (vph)	1777	7	4	1667	23	13
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLT		TWLT			
Median storage (veh)	2		2			
Upstream signal (ft)	635					
pX, platoon unblocked		0.77		0.77	0.77	0.77
vC, conflicting volume		1784		2623	892	1781
vC1, stage 1 conf vol					842	
vC2, stage 2 conf vol		1412		2508	247	
vCu, unblocked vol		4.1		6.8	6.9	
IC, single (s)				5.8		
IC, 2 stage (s)				2.2	3.5	3.3
IF (s)				99	83	98
p0 queue free %				36.7	133	577
cM capacity (veh/h)						
Direction, Lane #						
	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	1185	599	4	833	833	36
Volume Left	0	0	4	0	0	23
Volume Right	0	7	0	0	0	13
cSH	1700	1700	367	1700	1700	183
Volume to Capacity	0.70	0.35	0.01	0.49	0.49	0.20
Queue Length 95th (ft)	0	0	1	0	0	18
Control Delay (s)	0.0	0.0	14.9	0.0	0.0	29.4
Lane LOS			B			D
Approach Delay (s)	0.0	0.0	0.0	0.0	0.0	29.4
Approach LOS						D
Intersection Summary						
Average Delay	0.3					
Intersection Capacity Utilization	53.4%					
ICU Level of Service	A					
Analysis Period (min)	15					

Proposed Westwood Mixed Use Neighborhood 2023 Background Conditions - AM Peak Hour
11: Sheridan Drive & Frankhauser Road

4/24/2014



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (vph)	26	1531	1492	24	38	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105	0	0	0	0	50
Storage Lanes	1	0	0	0	1	1
Taper Length (ft)	65	25	25	25	25	25
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Flt Protected	0.950				0.950	0.850
Satd. Flow (prot)	1770	3539	3532	0	1770	1583
Flt Permitted	0.130				0.950	
Satd. Flow (perm)	242	3539	3532	0	1770	1583
Right Turn on Red		Yes			Yes	Yes
Satd. Flow (RTOR)		3			8	
Link Speed (mph)	45	45	45	30	30	30
Link Distance (ft)	101.4	635	614	14.0	14.0	14.0
Travel Time (s)	15.4	9.6	9.6	14.0	14.0	14.0
Peak Hour Factor	0.89	0.89	0.94	0.94	0.73	0.73
Adj. Flow (vph)	29	1720	1587	26	52	40
Shared Lane Traffic (%)						
Lane Group Flow (vph)	29	1720	1613	0	52	40
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Right
Median Width(ft)	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	2	2	9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Left	Right	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94	94	94	6	6	6
Detector 2 Size(ft)	6	6	6	6	6	6
Detector 2 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 2 Channel						
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm				Perm	Perm
Protected Phases		2	6	4		4
Permitted Phases	2	2	6	4	4	4
Detector Phase	2	2	6	4	4	4

Lanes, Volumes, Timings
SRF & Associates

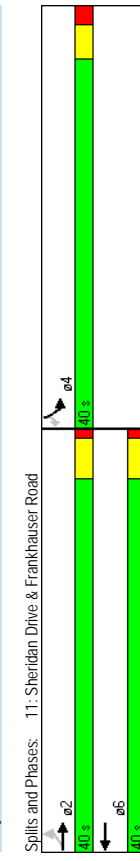
Synchro 7 - Report
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Proposed Westwood Mixed Use Neighborhood 2023 Background Conditions - AM Peak Hour
11: Sheridan Drive & Frankhauser Road

4/24/2014



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	1.0	1.0
Minimum Split (s)	40.0	40.0	40.0	40.0	31.1	31.1
Total Split (s)	40.0	40.0	40.0	40.0	40.0	40.0
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Maximum Green (s)	35.2	35.2	35.2	35.2	34.9	34.9
Yellow Time (s)	3.9	3.9	3.9	3.9	3.2	3.2
All-Red Time (s)	0.9	0.9	0.9	0.9	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.8	4.8	4.8	4.8	5.1	5.1
LeadLag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0	15.0	15.0	19.0	19.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effct Green (s)	65.3	65.3	65.3	65.3	7.8	7.8
Actuated g/C Ratio	0.82	0.82	0.82	0.82	0.10	0.10
v/c Ratio	0.15	0.60	0.56	0.30	0.25	0.25
Control Delay	4.6	4.8	4.4	4.4	37.3	31.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.6	4.8	4.4	4.4	37.3	31.2
LOS	A	A	A	A	D	C
Approach Delay	4.8	4.4	4.4	4.4	34.7	C
Approach LOS	A	A	A	A	C	C



Lanes, Volumes, Timings
SRF & Associates

Synchro 7 - Report
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Proposed Westwood Mixed Use Neighborhood 2023 Background Conditions - AM Peak Hour
12: Sheridan Drive & I-290 NB

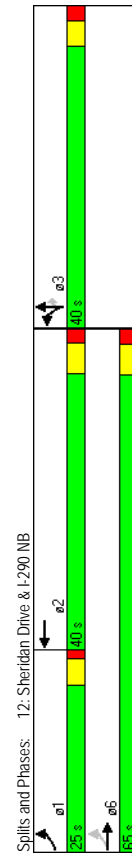
4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	249	1373	0	0	987	490	269	0	220	0	0
Ideal Flow (vpph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	0	0	230	0	0	0	0	0	0
Storage Lanes	1	0	0	0	1	0	0	0	0	0	0
Taper Length (ft)	105	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	0.95	0.91	0.95	1.00	1.00
Flt Protected	0.950				0.950	0.940	0.850				
Satd. Flow (prot)	1770	5085	0	0	4831	0	1681	1547	1504	0	0
Flt Permitted	0.102				0.950	0.971					
Satd. Flow (perm)	190	5085	0	0	4831	0	1681	1547	1504	0	0
Right Turn on Red		Yes			Yes				Yes		Yes
Satd. Flow (RTOR)		45			126				33		30
Link Speed (mph)		197			45				30		423
Link Distance (ft)		3.0			2.9				18.9		9.6
Travel Time (s)		0.94			0.94				0.88		0.92
Peak Hour Factor		265			1461				0.88		0.92
Adj. Flow (vph)		0.94			0.94				0.88		0.92
Shared Lane Traffic (%)									37%		30%
Lane Group Flow (vph)		265			1461				0.88		0.92
Enter Blocked Intersection		No			No				No		No
Lane Alignment		Left			Left				Right		Left
Median Width(ft)		12			12				12		12
Link Offset(ft)		0			0				0		0
Crosswalk Width(ft)		16			16				16		16
Two way Left Turn Lane											
Headway Factor		1.00			1.00				1.00		1.00
Turning Speed (mph)		15			9				15		15
Number of Detectors		1			2				1		2
Detector Template		Left			Thru				Right		Right
Leading Detector (ft)		20			100				20		20
Trailing Detector (ft)		0			0				0		0
Detector 1 Position(ft)		0			0				0		0
Detector 1 Size(ft)		20			6				6		20
Detector 1 Type		CI+EX			CI+EX				CI+EX		CI+EX
Detector 1 Channel											
Detector 1 Extend (s)		0.0			0.0				0.0		0.0
Detector 1 Queue (s)		0.0			0.0				0.0		0.0
Detector 1 Delay (s)		0.0			0.0				0.0		0.0
Detector 2 Position(ft)		94			94				94		94
Detector 2 Size(ft)		6			6				6		6
Detector 2 Type		CI+EX			CI+EX				CI+EX		CI+EX
Detector 2 Channel											
Detector 2 Extend (s)		0.0			0.0				0.0		0.0
Turn Type		pm+pt			custom				Perm		Perm
Protected Phases		1			2				3		3
Permitted Phases		6			2				3		3
Detector Phase		1			2				3		3

Proposed Westwood Mixed Use Neighborhood 2023 Background Conditions - AM Peak Hour
12: Sheridan Drive & I-290 NB

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	1.0	4.0			4.0		4.0	4.0	4.0		4.0
Minimum Split (s)	6.2	33.9			27.8		29.0	29.0	29.0		29.0
Total Split (s)	25.0	65.0			40.0		40.0	40.0	40.0		40.0
Total Split (%)	23.8%	61.9%			38.1%		38.1%	38.1%	38.1%		38.1%
Maximum Green (s)	20.7	59.1			34.2		34.8	34.8	34.8		34.8
Yellow Time (s)	3.2	3.9			3.9		3.2	3.2	3.2		3.2
All-Red Time (s)	1.1	2.0			1.9		2.0	2.0	2.0		2.0
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0	0.0		0.0
Total Lost Time (s)	4.3	5.9			5.8		5.2	5.2	5.2		5.2
Lead/Lag	Lead	Lag			Lag						
Vehicle Extension (s)	2.0	3.0			3.0		2.0	2.0	2.0		2.0
Recall Mode	None	C-Max			C-Max		None	None	None		None
Walk Time (s)	7.0				7.0						
Flash Dont Walk (s)	21.0				15.0						
Pedestrian Calls (#/hr)	0				0						
Act Effct Green (s)	78.4	76.8			59.1		17.1	17.1	17.1		17.1
Actuated g/C Ratio	0.75	0.73			0.56		0.16	0.16	0.16		0.16
v/c Ratio	0.77	0.39			0.57		0.71	0.67	0.64		0.64
Control Delay	31.4	6.2			16.3		54.8	45.1	43.2		43.2
Queue Delay	0.0	0.0			0.0		0.0	0.0	0.0		0.0
Total Delay	31.4	6.2			16.3		54.8	45.1	43.2		43.2
LOS	C	A			B		D	D	D		D
Approach Delay		10.1			16.3						
Approach LOS		B			B						



Proposed Westwood Mixed Use Neighborhood 2023 Background Conditions - AM Peak Hour
13: Sheridan Drive & Harlem Road

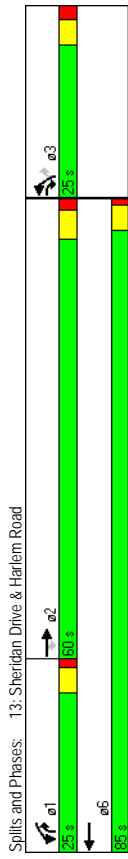
4/24/2014

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔↔	↔↔	↔↔	↔↔	↔↔
Volume (vph)	819	315	459	797	285	803
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	215	0	140	0	0
Storage Lanes	1	1	1	2	2	2
Taper Length (ft)	230	100	100	100	25	25
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	0.88
Flt Protected	0.850					0.850
Satd. Flow (prot)	3539	1583	3433	3539	3433	2787
Flt Permitted	0.950					0.950
Satd. Flow (perm)	3539	1583	3433	3539	3433	2787
Right Turn on Red	No					Yes
Satd. Flow (RTOR)						144
Link Speed (mph)	45			45	35	
Link Distance (ft)	314			413	338	
Travel Time (s)	4.8			6.3	6.6	
Peak Hour Factor	0.85	0.85	0.92	0.92	0.90	0.90
Adj. Flow (vph)	964	371	499	866	317	892
Shared Lane Traffic (%)						
Lane Group Flow (vph)	964	371	499	866	317	892
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Right	Right
Median Width(ft)	12		24	24	24	
Link Offset(ft)	0		0	0	0	
Crosswalk Width(ft)	16		16	16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		15	15	9
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (ft)	100	20	20	100	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	6	20	20	6	20	20
Detector 1 Type	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Ch+Ex			Ch+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type		pm+ov	Prot			pm+ov
Protected Phases	2	3	1	6	3	1
Permitted Phases	2	3	1	6	3	1
Detector Phase	2	3	1	6	3	1

Proposed Westwood Mixed Use Neighborhood 2023 Background Conditions - AM Peak Hour
13: Sheridan Drive & Harlem Road

4/24/2014

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Switch Phase	→	→	←	←	←	←
Minimum Initial (s)	1.0	1.0	1.0	4.0	1.0	1.0
Minimum Split (s)	30.5	6.2	5.3	32.3	6.2	5.3
Total Split (s)	60.0	25.0	25.0	85.0	25.0	25.0
Total Split (%)	54.5%	22.7%	22.7%	77.3%	22.7%	22.7%
Maximum Green (s)	54.5	19.8	20.7	80.7	19.8	20.7
Yellow Time (s)	3.9	3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.6	2.0	1.1	1.1	2.0	1.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.2	4.3	4.3	5.2	4.3
Lead/Lag	Lag	Lead	Lead	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	C-Max	None	None	None	None	None
Walk Time (s)	7.0		7.0			
Flash Dont Walk (s)	18.0		21.0			
Pedestrian Calls (#/hr)	0		0			
Act Effct Green (s)	60.3	80.3	20.2	86.0	14.5	39.9
Actuated g/C Ratio	0.55	0.73	0.18	0.78	0.13	0.36
v/c Ratio	0.50	0.32	0.79	0.31	0.70	0.81
Control Delay	17.5	6.5	52.4	4.0	54.1	32.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.5	6.5	52.4	4.0	54.1	32.1
LOS	B	A	D	A	D	C
Approach Delay	14.4			21.7	37.9	
Approach LOS	B			C	D	
Intersection Summary						
Area Type:	Other					
Cycle Length:	110					
Actuated Cycle Length:	110					
Offset:	24 (22%), Referenced to phase 2:EBT, Start of Green					
Natural Cycle:	60					
Control Type:	Actuated-Coordinated					
Maximum v/c Ratio:	0.81					
Intersection Signal Delay:	24.2					
Intersection Capacity Utilization:	58.9%					
Analysis Period (min):	15					



Proposed Westwood Mixed Use Neighborhood 2023 Background Conditions - AM Peak Hour
4/24/2014
14: I-290 SB & Harlem Road

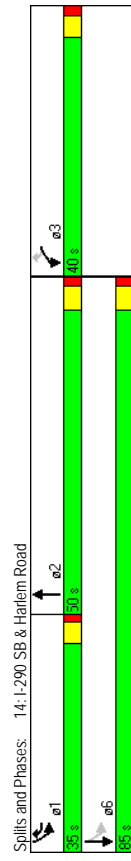
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (vph)	298	681	446	21	378	364
Ideal Flow (vpph)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	0	0	330	0
Storage Lanes	1	1	0	0	1	0
Taper Length (ft)	25	25	25	25	75	25
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Flt	0.850	0.993				
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	3514	0	1770	3539
Flt Permitted	0.950				0.262	
Satd. Flow (perm)	1770	1583	3514	0	488	3539
Right Turn on Red	Yes	Yes	Yes	Yes		
Satd. Flow (RTOR)	168	4				
Link Speed (mph)	30	35				35
Link Distance (ft)	333	250				456
Travel Time (s)	7.6	4.9				8.9
Peak Hour Factor	0.81	0.81	0.87	0.87	0.88	0.88
Adj. Flow (vph)	368	841	513	24	430	414
Shared Lane Traffic (%)						
Lane Group Flow (vph)	368	841	537	0	430	414
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12	12			12	12
Link Offset(ft)	0	0			0	0
Crosswalk Width(ft)	16	16			16	16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru	Left	Thru	
Leading Detector (ft)	20	20	100	20	100	
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	6	
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			CI+EX			CI+EX
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type		pm+ov			pm+pl	
Protected Phases	3	1	2	1	1	6
Permitted Phases		3			6	
Detector Phase	3	1	2	1	1	6

Proposed Westwood Mixed Use Neighborhood 2023 Background Conditions - AM Peak Hour
4/24/2014
14: I-290 SB & Harlem Road

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Switch Phase	↔	↔	↔	↔	↔	↔
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	9.2	30.6		9.2	21.0
Total Split (s)	40.0	35.0	50.0	0.0	35.0	85.0
Total Split (%)	32.0%	28.0%	40.0%	0.0%	28.0%	68.0%
Maximum Green (s)	35.2	30.7	45.0		30.7	80.0
Yellow Time (s)	3.2	3.2	3.6		3.2	3.6
All-Red Time (s)	1.6	1.1	1.4		1.1	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.8	4.3	5.0	4.0	4.3	5.0
Lead/Lag	Lead	Lead	Lag		Lead	
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	Min		None	None
Walk Time (s)			10.0			
Flash Dont Walk (s)			15.0			
Pedestrian Calls (#/hr)			0			
Act Effct Green (s)	22.7	48.7	19.3		45.6	44.8
Actuated g/C Ratio	0.29	0.62	0.25		0.58	0.57
v/c Ratio	0.72	0.80	0.62		0.68	0.20
Control Delay	35.1	15.8	31.1		17.1	8.8
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	35.1	15.8	31.1		17.1	8.8
LOS	D	B	C		B	A
Approach Delay	21.7		31.1			13.0
Approach LOS	C		C			B

Intersection Summary

Area Type:	Other
Cycle Length:	125
Actuated Cycle Length:	78
Natural Cycle:	90
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.80
Intersection Signal Delay:	20.8
Intersection Capacity Utilization:	62.9%
Analysis Period (min):	15
ICU Level of Service:	B



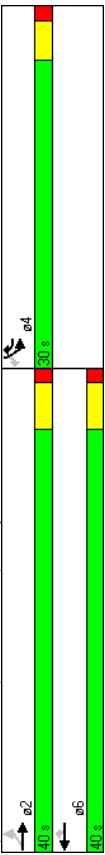
Proposed Westwood Mixed Use Neighborhood 2023 Background Conditions - PM Peak Hour
 1: Maple Road & Millersport Hwy SB
 4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (vph)	29	936	841	227	55	174
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	150	150	0	0	0
Storage Lanes	1	1	1	1	1	1
Taper Length (ft)	35	100	100	25	25	25
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Flt Protected	0.950		0.850		0.950	
Satd. Flow (prot)	1770	3539	3539	1583	1770	1583
Flt Permitted	0.296				0.950	
Satd. Flow (perm)	551	3539	3539	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)		45	45		30	96
Link Speed (mph)		555	654		281	
Link Distance (ft)		8.4	9.9		6.4	
Travel Time (s)		0.90	0.92	0.92	0.81	0.81
Peak Hour Factor		32	1040	914	247	68
Adj. Flow (vph)		32	1040	914	247	68
Shared Lane Traffic (%)						
Lane Group Flow (vph)	No	No	No	No	No	No
Enter Blocked Intersection	Left	Left	Right	Left	Right	Right
Lane Alignment	Left	Left	Right	Left	Right	Right
Median Width(ft)	0	0	0	0	0	0
Link Offset(ft)	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16
Two way Left Turn Lane		Yes				
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	15	15	15	15	15
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94	94	94			
Detector 2 Size(ft)	6	6	6			
Detector 2 Type	Ch+Ex	Ch+Ex	Ch+Ex			
Detector 2 Channel						
Detector 2 Extend (s)	0.0	0.0	0.0			
Turn Type	Perm			pm+ov		Perm
Protected Phases	2	6	6	4	4	
Permitted Phases	2	2	6	4	4	4
Detector Phase	2	2	6	4	4	4

Proposed Westwood Mixed Use Neighborhood 2023 Background Conditions - PM Peak Hour
 1: Maple Road & Millersport Hwy SB
 4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	1.0	1.0	1.0
Minimum Split (s)	9.1	9.1	9.1	6.2	6.2	6.2
Total Split (s)	40.0	40.0	40.0	30.0	30.0	30.0
Total Split (%)	57.1%	57.1%	57.1%	42.9%	42.9%	42.9%
Maximum Green (s)	34.9	34.9	34.9	25.4	25.4	25.4
Yellow Time (s)	3.9	3.9	3.9	3.2	3.2	3.2
All-Red Time (s)	1.2	1.2	1.2	1.4	1.4	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	4.6	4.6	4.6
LeadLag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Min	C-Min	C-Min	None	None	None
Act Effct Green (s)	49.0	49.0	49.0	7.0	11.3	11.3
Actuated g/C Ratio	0.70	0.70	0.70	1.00	0.16	0.16
v/c Ratio	0.08	0.42	0.37	0.16	0.24	0.64
Control Delay	5.4	5.8	7.1	0.2	25.5	23.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.4	5.8	7.1	0.2	25.5	23.3
LOS	A	A	A	A	C	C
Approach Delay						
Approach LOS	A	A	A	A	C	C

Intersection Summary
 Area Type: Other
 Cycle Length: 70
 Actuated Cycle Length: 70
 Offset: 5 (7%), Referenced to phase 2:EBTL and 6:WBT. Start of Green
 Natural Cycle: 40
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.64
 Intersection Signal Delay: 7.7
 Intersection LOS: A
 ICU Level of Service: A
 Intersection Capacity Utilization: 42.1%
 Analysis Period (min): 15



Splits and Phases: 1: Maple Road & Millersport Hwy SB

Proposed Westwood Mixed Use Neighborhood 2023 Background Conditions - PM Peak Hour
2: Maple Road & Millersport Hwy NB

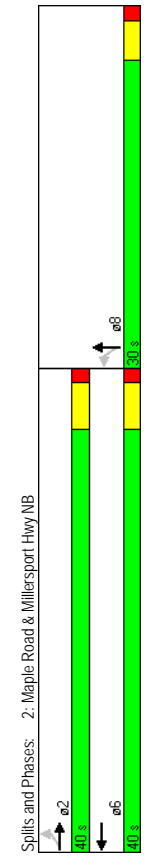
4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations											
Volume (vph)	97	894	0	0	976	24	91	0	462	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	0	0	0	0	0	0	0	0	0
Storage Lanes	1	0	0	0	0	1	0	0	0	0	0
Taper Length (ft)	50	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.950				0.996		0.950				
Satd. Flow (prot)	1770	3539	0	0	3525	0	1770	1583	0	0	0
Flt Permitted	0.164				0.950		0.950				
Satd. Flow (perm)	305	3539	0	0	3525	0	1770	1583	0	0	0
Right Turn on Red					Yes		Yes		Yes		Yes
Satd. Flow (RTOR)					5		79				
Link Speed (mph)		45			45		30				30
Link Distance (ft)		654			1770		319				263
Travel Time (s)		9.9			26.8		7.3				6.0
Peak Hour Factor	0.91	0.91	0.87	0.87	0.87	0.84	0.84	0.84	0.84	0.92	0.92
Adj. Flow (vph)	107	982	0	0	1122	28	108	0	550	0	0
Shared Lane Traffic (%)											
Lane Group Flow (vph)	107	982	0	0	1150	0	108	550	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane	Yes			Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9	15	9	15	9	15
Number of Detectors	1	2		2		1	1	2			
Detector Template	Left	Thru		Thru		Left	Thru				
Leading Detector (ft)	20	100		100		20	100				
Trailing Detector (ft)	0	0		0		0	0				
Detector 1 Position(ft)	0	0		0		0	0				
Detector 1 Size(ft)	20	6		6		20	6				
Detector 1 Type	Ch+Ex	Ch+Ex		Ch+Ex		Ch+Ex	Ch+Ex				
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0		0.0		0.0	0.0				
Detector 1 Queue (s)	0.0	0.0		0.0		0.0	0.0				
Detector 1 Delay (s)	0.0	0.0		0.0		0.0	0.0				
Detector 2 Position(ft)	94	94		94		94	94				
Detector 2 Size(ft)	6	6		6		6	6				
Detector 2 Type	Ch+Ex	Ch+Ex		Ch+Ex		Ch+Ex	Ch+Ex				
Detector 2 Channel											
Detector 2 Extend (s)	0.0	0.0		0.0		0.0	0.0				
Turn Type	Perm					Perm					
Protected Phases	2			6		8			8		
Permitted Phases	2			6		8			8		
Detector Phase	2			6		8			8		

Proposed Westwood Mixed Use Neighborhood 2023 Background Conditions - PM Peak Hour
2: Maple Road & Millersport Hwy NB

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	1.0	1.0		4.0		4.0	1.0	1.0	1.0		1.0
Minimum Split (s)	6.1	6.1		9.1		9.1	6.2	6.2	6.2		6.2
Total Split (s)	40.0	40.0	0.0	0.0	40.0	0.0	30.0	30.0	30.0	0.0	0.0
Total Split (%)	57.1%	57.1%	0.0%	0.0%	57.1%	0.0%	42.9%	42.9%	42.9%	0.0%	0.0%
Maximum Green (s)	34.9	34.9		34.9		34.9	25.4	25.4	25.4		25.4
Yellow Time (s)	3.9	3.9		3.9		3.9	3.2	3.2	3.2		3.2
All-Red Time (s)	1.2	1.2		1.2		1.2	1.4	1.4	1.4		1.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	4.0	4.0	5.1	4.0	4.6	4.6	4.6	4.0	4.0
Lead-Lag											
Lead-Lag Optimize?											
Vehicle Extension (s)	3.0	3.0		3.0		3.0	3.0	3.0	3.0		3.0
Recall Mode	C-Min	C-Min		C-Min		C-Min	None	None	None		None
Act Effct Green (s)	36.0	36.0		36.0		36.0	24.3	24.3	24.3		24.3
Actuated g/C Ratio	0.51	0.51		0.51		0.51	0.35	0.35	0.35		0.35
v/c Ratio	0.68	0.54		0.63		0.63	0.18	0.18	0.18		0.92
Control Delay	37.4	10.6		14.5		14.5	16.2	16.2	16.2		41.4
Queue Delay	0.0	0.0		0.0		0.0	0.0	0.0	0.0		0.0
Total Delay	37.4	10.6		14.5		14.5	16.2	16.2	16.2		41.4
LOS	D	B		B		B	B	B	B		D
Approach Delay											
Approach LOS	B	B		B		B	B	B	B		D



Proposed Westwood Mixed Use Neighborhood 2023 Background Conditions - PM Peak Hour
3: Maple Road & Maplemere Road

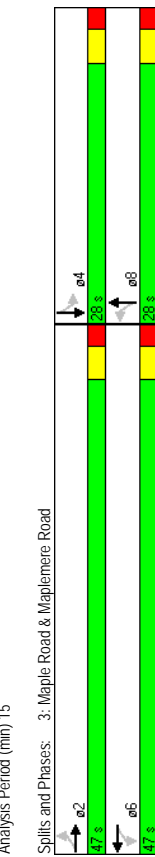
4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations											
Volume (vph)	36	1218	35	21	890	62	22	0	12	77	8
Ideal Flow (vpph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	70	0	0	0	0	0	0	0
Storage Lanes	1		0	1	0	0	0	0	0	0	0
Taper Length (ft)	50		25	50	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.950		0.950	0.950		0.952		0.969		0.964	
Satd. Flow (prot)	1770	3525	0	1770	3504	0	1718	0	1738	0	1738
Flt Permitted	0.231		0	0.161		0.788		0.969		0.767	
Right Turn on Red	430	3525	0	300	3504	0	1397	0	1377	0	1377
Satd. Flow (RTOR)	6		Yes	15	Yes	19	Yes	Yes	25	Yes	25
Link Speed (mph)	45			45		30		30		30	
Link Distance (ft)	26.8			1106		378		402		402	
Travel Time (s)	26.8			16.8		8.6		9.1		9.1	
Peak Hour Factor	0.94	0.94	0.94	0.87	0.87	0.87	0.62	0.62	0.62	0.81	0.81
Adj. Flow (vph)	38	1296	37	24	1023	71	35	0	19	95	10
Shared Lane Traffic (%)	38	1333	0	24	1094	0	0	54	0	0	143
Lane Group Flow (vph)	No	No	No	No	No	No	No	No	No	No	No
Enter Blocked Intersection	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Right
Lane Alignment	12			12							
Median Width(ft)	0			0							
Link Offset(ft)	16			16		16		16		16	
Crosswalk Width(ft)	Yes			Yes		Yes		Yes		Yes	
Two way Left Turn Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Headway Factor	15		9	15		9	15		9	15	
Turning Speed (mph)	1		2	1		2	1		2	1	
Number of Detectors	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Thru
Detector Template	20	100	20	100	20	100	20	100	20	100	100
Leading Detector (ft)	0		0	0		0	0		0	0	
Trailing Detector (ft)	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	20	6	20	6	20	6	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94		94		94		94		94		94
Detector 2 Size(ft)	6		6		6		6		6		6
Detector 2 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 2 Channel											
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm
Protected Phases	2		6		6		8		8		4
Permitted Phases	2		6		6		8		8		4
Detector Phase	2		6		6		8		8		4

Proposed Westwood Mixed Use Neighborhood 2023 Background Conditions - PM Peak Hour
3: Maple Road & Maplemere Road

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	4.0			4.0			4.0		4.0		4.0
Minimum Split (s)	9.0			9.0			27.0		27.0		27.0
Total Split (s)	47.0			47.0			28.0		28.0		28.0
Total Split (%)	62.7%			62.7%			37.3%		37.3%		37.3%
Maximum Green (s)	42.0			42.0			23.0		23.0		23.0
Yellow Time (s)	3.0			3.0			3.0		3.0		3.0
All-Red Time (s)	2.0			2.0			2.0		2.0		2.0
Lost Time Adjust (s)	0.0			0.0			0.0		0.0		0.0
Total Lost Time (s)	5.0			5.0			5.0		5.0		5.0
LeadLag											
Lead-Lag Optimize?											
Vehicle Extension (s)	3.0			3.0			3.0		3.0		3.0
Recall Mode	Min			Min			None		None		None
Walk Time (s)	7.0			7.0			7.0		7.0		7.0
Flash Dont Walk (s)	15.0			15.0			15.0		15.0		15.0
Pedestrian Calls (#/hr)							0		0		0
Act Effct Green (s)	33.2			33.2			33.2		9.6		10.2
Actuated g/C Ratio	0.68			0.68			0.68		0.20		0.21
v/c Ratio	0.13			0.12			0.12		0.19		0.47
Control Delay	6.6			7.0			6.5		15.2		21.9
Queue Delay	0.0			0.0			0.0		0.0		0.0
Total Delay	6.6			7.5			7.0		15.2		21.9
LOS	A			A			A		B		C
Approach Delay	7.5			6.5			6.5		15.2		21.9
Approach LOS	A			A			A		B		C
Intersection Summary											
Area Type:	Other										
Cycle Length:	75										
Actuated Cycle Length:	49.1										
Natural Cycle:	60										
Control Type:	Actuated-Uncoordinated										
Maximum v/c Ratio:	0.56										
Intersection Signal Delay:	8.0										
Intersection Capacity Utilization:	50.9%										
Analysis Period (min):	15										
ICU Level of Service A											



Proposed Westwood Mixed Use Neighborhood 2023 Background Conditions - PM Peak Hour
4: Maple Road & Donna Lea Blvd

4/24/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕	↕	↔	↔	↔	↔
Volume (vph)	1278	29	23	961	12	21
Ideal Flow (vpph)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	50	0	0	0	0
Storage Lanes	0	1	0	1	0	0
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Flt Protected	0.997		0.950	0.982	0.982	
Satd. Flow (prot)	3529	0	1770	3539	1672	0
Flt Permitted	0.950		0.950	0.982	0.982	
Satd. Flow (perm)	3529	0	1770	3539	1672	0
Link Speed (mph)	45		45	30	30	
Link Distance (ft)	1106		1928	355	355	
Travel Time (s)	16.8		29.2	8.1	8.1	
Adj. Flow (vph)	1751	40	30	1248	15	26
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1791	0	30	1248	41	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12		12	12	12	
Link Offset(ft)	0		0	0	0	
Crosswalk Width(ft)	16		16	16	16	
Two way Left Turn Lane	Yes		Yes	Yes	Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15	15	15	15	9
Sign Control	Free	Free	Free	Free	Stop	Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	46.2%					
Analysis Period (min)	15					
ICU Level of Service:	A					

Proposed Westwood Mixed Use Neighborhood 2023 Background Conditions - PM Peak Hour
4: Maple Road & Donna Lea Blvd

4/24/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕	↕	↔	↔	↔	↔
Volume (veh/h)	1278	29	23	961	12	21
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%		0%	0%	0%	
Peak Hour Factor	0.73	0.73	0.77	0.77	0.82	0.82
Hourly flow rate (vph)	1751	40	30	1248	15	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL		TWLTL		2	
Median storage (veh)	2		2		2	
Upstream signal (ft)	1106		1106		684	
pX, platoon unblocked		0.77	0.77	0.77	0.77	0.77
vC, conflicting volume		1790	1790	2454	895	
vC1, stage 1 conf vol				1771		
vC2, stage 2 conf vol				684		
vCu, unblocked vol		1430	1430	2292	269	
IC, single (s)		4.1	4.1	6.8	6.9	
IC, 2 stage (s)				5.8		
IF (s)		2.2	2.2	3.5	3.3	
p0 queue free %		92	92	89	95	
cM capacity (veh/h)		363	363	137	562	
Direction, Lane #						
	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	1167	623	30	624	624	40
Volume Left	0	0	30	0	0	15
Volume Right	0	40	0	0	0	26
cSH	1700	1700	363	1700	1700	263
Volume to Capacity	0.69	0.37	0.08	0.37	0.37	0.15
Queue Length 95th (ft)	0	0	7	0	0	13
Control Delay (s)	0.0	0.0	15.8	0.0	0.0	21.1
Lane LOS			C			C
Approach Delay (s)	0.0	0.4	0.4			21.1
Approach LOS						C
Intersection Summary						
Average Delay	0.4					
Intersection Capacity Utilization	46.2%					
ICU Level of Service	A					
Analysis Period (min)	15					

Proposed Westwood Mixed Use Neighborhood 2023 Background Conditions - PM Peak Hour
 5: Maple Road & Audubon Golf Club

4/24/2014



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕
Volume (vph)	0	1292	14	8	984	2	10	0	0	6	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	50	0	0	0	0	0	0	0	0
Storage Lanes	1	0	1	0	0	0	0	0	0	0	0
Taper Length (ft)	25	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Flt	0.998			0.950			0.948				
Flt Protected				0.950			0.970				
Satd. Flow (prot)	1863	3532	0	1770	3539	0	1713	0	0	1863	0
Flt Permitted				0.950			0.970				
Satd. Flow (perm)	1863	3532	0	1770	3539	0	1713	0	0	1863	0
Link Speed (mph)	45			45			30			30	
Link Distance (ft)	446			556			469			111	
Travel Time (s)	6.8			8.4			10.7			2.5	
Peak Hour Factor	0.92	0.92	0.92	0.93	0.93	0.93	0.61	0.61	0.61	0.92	0.92
Adj. Flow (vph)	0	1404	15	9	1058	2	16	0	10	0	0
Shared Lane Traffic (%)											
Lane Group Flow (vph)	0	1419	0	9	1060	0	0	26	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Left	Right	Left	Right
Median Width (ft)	12			12			0			0	
Link Offset (ft)	0			0			0			0	
Crosswalk Width (ft)	16			16			16			16	
Two way Left Turn Lane	Yes			Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			15			15			15	
Sign Control	Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	46.2%
Analysis Period (min)	15

Proposed Westwood Mixed Use Neighborhood 2023 Background Conditions - PM Peak Hour
 5: Maple Road & Audubon Golf Club

4/24/2014



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕
Volume (veh/h)	0	1292	14	8	984	2	10	0	6	0	0
Sign Control	Free			Free			Stop			Stop	
Grade	0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.93	0.93	0.93	0.61	0.61	0.61	0.92	0.92
Hourly flow rate (vph)	0	1404	15	9	1058	2	16	0	10	0	0
Pedestrians											
Lane Width (ft)											
Walking Speed (ft/s)											
Percent Blockage											
Right turn flare (veh)											
Median type							TWLTL				
Median storage (veh)							2				
Upstream signal (ft)											
pX, platoon unblocked											
vC, conflicting volume	1060			1420			1958	2489	710	1788	2496
vC1, stage 1 conf vol							1412	1412	1076	1076	
vC2, stage 2 conf vol							546	1077	712	1420	
vCu, unblocked vol	1060			1420			1958	2489	710	1788	2496
IC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5
IC, 2 stage (s)							6.5	5.5	6.5	5.5	
IF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0
p0 queue free %	100			98			88	100	97	100	100
cM capacity (veh/h)	653			476			137	162	376	195	156

Direction, Lane #							
EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
0	936	483	9	705	355	26	0
Volume Total							
Volume Left	0	0	0	0	0	16	0
Volume Right	0	15	0	2	10	0	0
cSH	1700	1700	1700	476	1700	180	1700
Volume to Capacity	0.00	0.55	0.28	0.02	0.41	0.21	0.15
Queue Length 95th (ft)	0	0	0	1	0	0	12
Control Delay (s)	0.0	0.0	0.0	12.7	0.0	0.0	28.4
Lane LOS				B		D	A
Approach Delay (s)	0.0			0.1		28.4	0.0
Approach LOS				D		A	

Intersection Summary	
Average Delay	0.3
Intersection Capacity Utilization	46.2%
Analysis Period (min)	15
ICU Level of Service	A

Proposed Westwood Mixed Use Neighborhood 2023 Background Conditions - PM Peak Hour
6: Maple Road & North Forest Road

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	181	984	143	236	736	96	92	347	202	169	384
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Idle Flow (vpph)	415		220	315		150	125	220	250	250	250
Storage Length (ft)		1		1		1	1		1	1	1
Taper Length (ft)	90	115	60	25	95	25	95	25	90	90	25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
FRT	0.850		0.850		0.850		0.850		0.850		0.850
Flt Protected	0.950		0.950		0.950		0.950		0.950		0.950
Sat'd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1863	1583	1770	1863
Flt Permitted	0.230		0.095		0.095		0.177		0.185		0.185
Sat'd. Flow (perm)	428	3539	1583	177	3539	1583	330	1863	1583	345	1863
Right Turn on Red	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes
Sat'd. Flow (RTOR)	140							30			77
Link Speed (mph)	45			45		45	35		35		35
Link Distance (ft)	1705			820		529	608		608		608
Travel Time (s)	25.8			12.4		10.3	11.8		11.8		11.8
Peak Hour Factor	0.92	0.92	0.92	0.90	0.90	0.90	0.96	0.96	0.96	0.87	0.87
Adj. Flow (vph)	197	1070	155	262	818	107	96	361	210	194	441
Shared Lane Traffic (%)											
Lane Group Flow (vph)	197	1070	155	262	818	107	96	361	210	194	441
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Right	Right
Median Width (ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset (ft)	0			0		0	0		0		0
Crosswalk Width (ft)	16			16		16	16		16		16
Two way Left Turn Lane	Yes										
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	2	1	2	1	1	2	1	1
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size (ft)	20	6	20	6	20	6	20	6	20	6	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position (ft)	94			94		94	94		94		94
Detector 2 Size (ft)	6			6		6	6		6		6
Detector 2 Type	CI+EX			CI+EX		CI+EX	CI+EX		CI+EX		CI+EX
Detector 2 Channel											
Detector 2 Extend (s)	0.0			0.0		0.0	0.0		0.0		0.0
Turn Type	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+ov
Protected Phases	5	2	3	1	6	7	3	8	1	7	4
Permitted Phases	2	2	2	6	6	6	8	8	4	4	4
Detector Phase	5	2	3	1	6	7	3	8	1	7	4

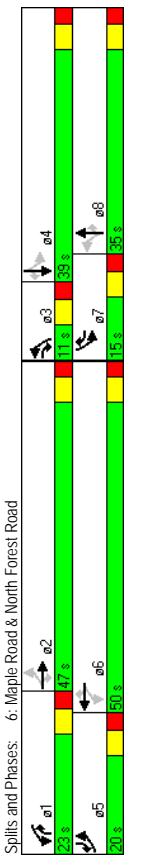
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Proposed Westwood Mixed Use Neighborhood 2023 Background Conditions - PM Peak Hour
6: Maple Road & North Forest Road

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase	1.0	4.0	1.0	1.0	4.0	1.0	1.0	4.0	1.0	1.0	4.0
Minimum Initial (s)	7.0	35.0	7.0	7.0	35.0	7.0	7.0	35.0	7.0	7.0	35.0
Minimum Split (s)	20.0	47.0	11.0	23.0	50.0	15.0	11.0	35.0	23.0	15.0	39.0
Total Split (s)	16.7%	39.2%	9.2%	19.2%	41.7%	12.5%	9.2%	29.2%	19.2%	12.5%	32.5%
Total Split (%)	14.0	41.0	5.0	17.0	44.0	9.0	5.0	29.0	17.0	9.0	33.0
Maximum Green (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Yellow Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Last Time Adjust (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Total Lost Time (s)	Lead/Lag	Lead/Lag	Lead/Lag	Lead/Lag	Lead/Lag	Lead/Lag	Lead/Lag	Lead/Lag	Lead/Lag	Lead/Lag	Lead/Lag
Lead/Lag	Yes/Yes	Yes/Yes	Yes/Yes	Yes/Yes	Yes/Yes	Yes/Yes	Yes/Yes	Yes/Yes	Yes/Yes	Yes/Yes	Yes/Yes
Lead-Lag Optimize?	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Vehicle Extension (s)	None	None	None	None	None	None	None	None	None	None	None
Recall Mode	7.0			7.0		7.0			7.0		7.0
Walk Time (s)	22.0			22.0		22.0		22.0		22.0	22.0
Flash Dont Walk (s)	0			0		0		0		0	0
Pedestrian Calls (#/hr)	50.1	38.3	49.4	57.5	41.9	57.1	31.0	25.9	47.5	39.1	30.0
Act Effct Green (s)	0.44	0.34	0.44	0.51	0.37	0.50	0.27	0.23	0.42	0.35	0.27
Activated G/C Ratio	0.60	0.89	0.20	0.85	0.62	0.13	0.62	0.85	0.31	0.83	0.89
v/c Ratio	23.2	46.7	5.1	53.0	32.1	16.5	46.3	61.2	20.1	57.6	62.5
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	23.2	46.7	5.1	53.0	32.1	16.5	46.3	61.2	20.1	57.6	62.5
Total Delay	C	D	A	D	C	B	D	D	E	C	E
LOS	38.9	D		35.3	D		46.1	D		52.0	D
Approach Delay		D			D			D			D
Approach LOS		D			D			D			D
Intersection Summary											
Area Type:	Other										
Cycle Length:	120										
Actuated Cycle Length:	113.1										
Natural Cycle:	85										
Control Type:	Actuated-Uncoordinated										
Maximum v/c Ratio:	0.89										
Intersection Signal Delay:	41.5										
Intersection Capacity Utilization:	87.9%										
Analysis Period (min):	15										



Spills and Phases: 6: Maple Road & North Forest Road

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Proposed Westwood Mixed Use Neighborhood 2023 Background Conditions - PM Peak Hour
 4/24/2014
 7: Sheridan Drive & Mill Street

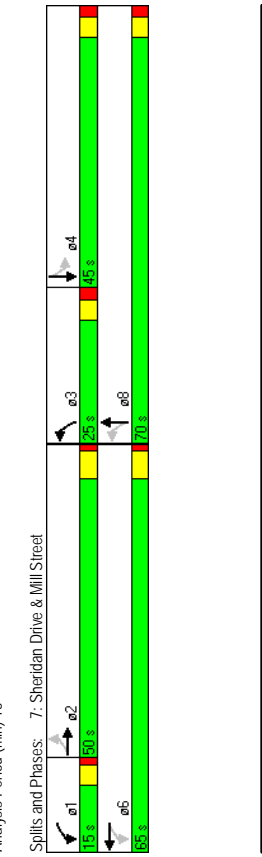


EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
11	1290	18	1332	53	144	53	148	34	68
1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
1	0	1	0	0	1	0	0	1	0
65	25	60	25	25	25	25	25	25	25
1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
	0.998		0.994		0.890				0.977
	0.950		0.950		0.950				0.950
	1770	3532	0	1770	3518	0	1770	1658	0
	0.089		0.081		0.600				0.608
	166	3532	0	151	3518	0	1118	1658	0
		No		Yes		No		No	Yes
	4								7
	45		45		30		30		30
	2782		977		838		362		82
	42.2		14.8		19.0				8.2
	0.84	0.84	0.92	0.92	0.83	0.83	0.83	0.83	0.77
	13	1536	21	132	1448	58	173	64	178
	13	1557	0	132	1506	0	173	242	0
	No	No	No	No	No	No	No	No	No
	12		12		12		12		12
	16		16		16		16		16
	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	15	9	15	9	15	9	15	9	15
	1	2	1	2	1	2	1	2	1
	20	100	20	100	20	100	20	100	20
	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0
	20	6	20	6	20	6	20	6	20
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	6	6	6	6	6	6	6	6	6
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	2	2	2	2	2	2	2	2	2
	2	2	2	2	2	2	2	2	2

Proposed Westwood Mixed Use Neighborhood 2023 Background Conditions - PM Peak Hour
 4/24/2014
 7: Sheridan Drive & Mill Street



EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
4.0	4.0	1.0	4.0	1.0	4.0	1.0	4.0	4.0	4.0
28.3	28.3	6.2	28.3	6.2	34.2	34.2	34.2	34.2	34.2
50.0	50.0	0.0	15.0	65.0	0.0	25.0	70.0	0.0	45.0
37.0%	37.0%	0.0%	11.1%	48.1%	0.0%	18.5%	51.9%	0.0%	33.3%
44.5	44.5	10.7	59.5	19.8	64.8	64.8	39.8	39.8	39.8
4.3	4.3	3.2	4.3	3.2	3.2	3.2	3.2	3.2	3.2
1.2	1.2	1.1	1.2	2.0	2.0	2.0	2.0	2.0	2.0
5.5	5.5	4.0	4.3	5.5	4.0	5.2	4.0	5.2	4.0
3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
None	None	None	None	None	None	None	None	None	None
7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
15.0	15.0	15.0	15.0	15.0	15.0	22.0	22.0	22.0	22.0
0	0	0	0	0	0	0	0	0	0
45.1	45.1	60.7	59.5	64.8	64.8	64.8	39.8	39.8	39.8
0.33	0.33	0.45	0.44	0.48	0.48	0.48	0.29	0.29	0.29
0.23	1.32	0.70	0.97	0.27	0.30	0.30	0.13	0.19	0.19
46.1	186.5	45.9	53.6	21.6	22.7	22.7	36.4	34.3	34.3
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
46.1	186.5	45.9	53.6	21.6	22.7	22.7	36.4	34.3	34.3
D	F	D	D	D	C	C	D	D	C
185.4	F	53.0	D	22.2	C	C	34.9	C	C



Proposed Westwood Mixed Use Neighborhood 2023 Background Conditions - PM Peak Hour
8: Sheridan Drive & North Forest Road

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	138	1258	260	305	1124	41	271	464	82	24	494
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	405	170	260	0	180	0	265	180	200	200	200
Storage Lanes	1	1	1	0	1	0	1	1	1	1	1
Taper Length (ft)	200	25	200	25	200	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95
Flt Protected	0.950		0.850		0.995		0.850		0.850		0.850
Satd. Flow (prot)	1770	3539	1583	1770	3522	0	1770	1863	1583	1770	3539
Flt Permitted	0.074		0.068		0.185		0.185		0.171		0.171
Satd. Flow (perm)	138	3539	1583	127	3522	0	345	1863	1583	319	3539
Right Turn on Red	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Satd. Flow (RTOR)	130		130		3		3		70		213
Link Speed (mph)	45		45		45		40		40		35
Link Distance (ft)	1668		2219		33.6		547		9.3		354
Travel Time (s)	25.3		33.6		9.3		6.9		6.9		6.9
Peak Hour Factor	0.94	0.94	0.94	0.93	0.93	0.93	0.89	0.89	0.89	0.95	0.95
Adj. Flow (vph)	147	1338	277	328	1209	44	304	521	92	25	520
Shared Lane Traffic (%)	147	1338	277	328	1253	0	304	521	92	25	520
Lane Group Flow (vph)	No	No	No	No	No	No	No	No	No	No	No
Enter Blocked Intersection	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left
Lane Alignment	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left
Median Width (ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset (ft)	0		0		0		0		0		0
Crosswalk Width (ft)	16		16		16		16		16		16
Two way Left Turn Lane	Yes		Yes		Yes		Yes		Yes		Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9	15	9	15	9	15
Number of Detectors	1	2	1	2	1	2	1	2	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru
Leading Detector (ft)	20	100	20	100	20	100	20	100	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size (ft)	20	6	20	20	6	20	6	20	20	6	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position (ft)	94		94		94		94		94		94
Detector 2 Size (ft)	6		6		6		6		6		6
Detector 2 Type	CI+EX		CI+EX		CI+EX		CI+EX		CI+EX		CI+EX
Detector 2 Channel											
Detector 2 Extend (s)	0.0		0.0		0.0		0.0		0.0		0.0
Turn Type	pm+pt	Perm	pm+pt	Perm	pm+pt	Perm	pm+pt	Perm	pm+pt	Perm	pm+pt
Protected Phases	1	6	6	2	2	4	4	4	4	8	8
Permitted Phases	6	6	6	2	2	4	4	4	4	8	8
Detector Phase	1	6	6	5	2	7	4	4	4	3	8

Proposed Westwood Mixed Use Neighborhood 2023 Background Conditions - PM Peak Hour
8: Sheridan Drive & North Forest Road

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.3	27.9	27.9	8.3	27.9	8.3	27.9	27.9	27.9	8.3	27.9
Total Split (s)	30.0	60.0	60.0	20.0	50.0	0.0	25.0	40.0	40.0	20.0	35.0
Total Split (%)	21.4%	42.9%	42.9%	14.3%	35.7%	0.0%	17.9%	28.6%	28.6%	14.3%	25.0%
Maximum Green (s)	25.7	54.9	54.9	15.7	44.9		20.7	34.9	34.9	15.7	29.9
Yellow Time (s)	3.2	3.9	3.9	3.2	3.9		3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.1	1.2	1.1	1.2	1.1		1.1	1.1	1.1	1.1	1.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.3	5.1	5.1	4.3	5.1		4.3	5.1	5.1	4.3	5.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	None	Max	Max		None	None	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0	15.0	15.0	15.0		15.0	15.0	15.0	15.0	15.0
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0	0	0	0
Act Effct Green (s)	68.0	55.0	55.0	73.8	58.5		50.7	43.0	43.0	33.0	25.4
Actuated g/C Ratio	0.50	0.41	0.41	0.55	0.43		0.38	0.32	0.32	0.24	0.19
v/c Ratio	0.68	0.93	0.38	1.26	0.82		0.89	0.88	0.17	0.17	0.78
Control Delay	42.3	50.8	16.7	177.9	40.4		60.3	61.5	12.6	29.9	61.0
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	42.3	50.8	16.7	177.9	40.4		60.3	61.5	12.6	29.9	61.0
LOS	D	D	B	F	D		E	E	B	C	E
Approach Delay	44.7		68.9		68.9		56.2		45.4		45.4
Approach LOS	D		E		E		E		D		D

Intersection Summary

Area Type:	Other
Cycle Length:	140
Actuated Cycle Length:	135.1
Natural Cycle:	125
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	1.26
Intersection Signal Delay:	54.5
Intersection Capacity Utilization:	96.0%
Analysis Period (min):	15

Proposed Westwood Mixed Use Neighborhood 2023 Background Conditions - PM Peak Hour
 9: Country Club Drive & North Forest Road

4/24/2014



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			4		
Volume (vph)	7	9	26	623	714	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fit	0.924			0.998		
Fit Protected	0.979			0.998		
Satd. Flow (prot)	1685	0	0	1859	1859	0
Fit Permitted	0.979			0.998		
Satd. Flow (perm)	1685	0	0	1859	1859	0
Link Speed (mph)	30			35	35	
Link Distance (ft)	217			310	192	
Travel Time (s)	4.9			6.0	3.7	
Peak Hour Factor	0.50	0.50	0.83	0.83	0.90	0.90
Adj. Flow (vph)	14	18	31	751	793	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	32	0	0	782	807	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop		Free	Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	63.9%					
Analysis Period (min)	15					
ICU Level of Service	B					

Proposed Westwood Mixed Use Neighborhood 2023 Background Conditions - PM Peak Hour
 9: Country Club Drive & North Forest Road

4/24/2014



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			4		
Volume (veh/h)	7	9	26	623	714	13
Sign Control	Stop		Free	Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.50	0.50	0.83	0.83	0.90	0.90
Hourly flow rate (vph)	14	18	31	751	793	14
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)				664		
pX, platoon unblocked	0.69					
vC, conflicting volume	1614	801	808			
vC1, stage 1 cont vol						
vC2, stage 2 cont vol						
vCu, unblocked vol	1665	801	808			
IC, single (s)	6.4	6.2	4.1			
IC, 2 stage (s)						
IF (s)	3.5	3.3	2.2			
p0 queue free %	80	95	96			
cM capacity (veh/h)	70	385	817			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	32	782	808			
Volume Left	14	31	0			
Volume Right	18	0	14			
cSH	130	817	1700			
Volume to Capacity	0.25	0.04	0.48			
Queue Length 95th (ft)	23	3	0			
Control Delay (s)	41.5	1.0	0.0			
Lane LOS	E	A				
Approach Delay (s)	41.5	1.0	0.0			
Approach LOS	E					
Intersection Summary						
Average Delay	1.3					
Intersection Capacity Utilization	63.9%					
ICU Level of Service	B					
Analysis Period (min)	15					

Proposed Westwood Mixed Use Neighborhood 2023 Background Conditions - PM Peak Hour
10: Sheridan Drive & Fenwick Road

4/24/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕↕	↕	↕	↕↕	↕	↕↕
Volume (vph)	1639	13	5	1591	13	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	75	0	0	0	0
Storage Lanes	0	1	0	1	0	0
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Flt Protected	0.999		0.950	0.922		0.979
Satd. Flow (prot)	3536	0	1770	3539	1681	0
Flt Permitted	0.950		0.950	0.979		0.979
Satd. Flow (perm)	3536	0	1770	3539	1681	0
Link Speed (mph)	45		45	30		30
Link Distance (ft)	635		1668	278		278
Travel Time (s)	9.6		25.3	6.3		6.3
Peak Hour Factor	0.87	0.87	0.94	0.94	0.75	0.75
Adj. Flow (vph)	1884	15	5	1693	17	23
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1899	0	5	1693	40	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12		12	12		12
Link Offset(ft)	0		0	0		0
Crosswalk Width(ft)	16		16	16		16
Two way Left Turn Lane	Yes		Yes			Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15	15	15	15	9
Sign Control	Free	Free	Free	Free	Stop	Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	55.7%					
Analysis Period (min)	15					
ICU Level of Service:	B					

Proposed Westwood Mixed Use Neighborhood 2023 Background Conditions - PM Peak Hour
10: Sheridan Drive & Fenwick Road

4/24/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕↕	↕	↕	↕↕	↕	↕↕
Volume (veh/h)	1639	13	5	1591	13	17
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%		0%	0%		0%
Peak Hour Factor	0.87	0.87	0.94	0.94	0.75	0.75
Hourly flow rate (vph)	1884	15	5	1693	17	23
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLT		TWLT			TWLT
Median storage (veh)	2		2			2
Upstream signal (ft)	635					
pX, platoon unblocked		0.74		0.74		0.74
vC1, conflicting volume		1899		2748		949
vC1, stage 1 conf vol				1891		
vC2, stage 2 conf vol				857		
vCu, unblocked vol		1510		2659		225
IC, single (s)		4.1		6.8		6.9
IC, 2 stage (s)				5.8		
IF (s)		2.2		3.5		3.3
p0 queue free %		98		85		96
cM capacity (veh/h)		324		116		575
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	1256	643	5	846	846	40
Volume Left	0	0	5	0	0	17
Volume Right	0	15	0	0	0	23
cSH	1700	1700	324	1700	1700	211
Volume to Capacity	0.74	0.38	0.02	0.50	0.50	0.19
Queue Length 95th (ft)	0	0	1	0	0	17
Control Delay (s)	0.0	0.0	16.3	0.0	0.0	26.0
Lane LOS			C			D
Approach Delay (s)	0.0		0.1			26.0
Approach LOS			D			D
Intersection Summary						
Average Delay	0.3					
Intersection Capacity Utilization	55.7%					
ICU Level of Service	B					
Analysis Period (min)	15					

Proposed Westwood Mixed Use Neighborhood 2023 Background Conditions - PM Peak Hour
 11: Sheridan Drive & Frankhauser Road

4/24/2014



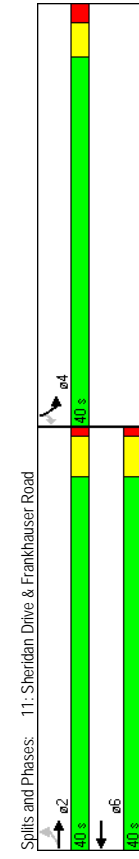
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	34	1599	1563	41	52	40
Volume (vph)	1900	1900	1900	1900	1900	1900
Ideal Flow (vppf)	105	0	0	0	0	50
Storage Length (ft)	1	0	0	1	1	1
Storage Lanes	65	25	25	25	25	25
Taper Length (ft)	1.00	0.95	0.95	0.95	1.00	1.00
Lane Util. Factor		0.996			0.850	
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	3539	3525	0	1770	1583
Flt Permitted	0.104				0.950	
Satd. Flow (perm)	194	3539	3525	0	1770	1583
Right Turn on Red		Yes			Yes	
Satd. Flow (RTOR)		4			5	
Link Speed (mph)	45	45			30	
Link Distance (ft)	101.4	635			614	
Travel Time (s)	15.4	9.6			14.0	
Peak Hour Factor	0.90	0.90	0.91	0.91	0.82	0.82
Adj. Flow (vph)	38	1777	1718	45	63	49
Shared Lane Traffic (%)						
Lane Group Flow (vph)	38	1777	1763	0	63	49
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Right
Median Width(ft)	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	2	2	9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Left	Right	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94	94	94	6	6	6
Detector 2 Size(ft)	6	6	6	6	6	6
Detector 2 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 2 Channel						
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm				Perm	
Protected Phases	2	2	6	4	4	4
Permitted Phases	2	2	6	4	4	4
Detector Phase	2	2	6	4	4	4

Proposed Westwood Mixed Use Neighborhood 2023 Background Conditions - PM Peak Hour
 11: Sheridan Drive & Frankhauser Road

4/24/2014



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	1.0	1.0
Minimum Split (s)	40.0	40.0	40.0	40.0	31.1	31.1
Total Split (s)	40.0	40.0	40.0	40.0	40.0	40.0
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Maximum Green (s)	35.2	35.2	35.2	35.2	34.9	34.9
Yellow Time (s)	3.9	3.9	3.9	3.9	3.2	3.2
All-Red Time (s)	0.9	0.9	0.9	0.9	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.8	4.8	4.8	4.8	5.1	5.1
Lead-Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0	15.0	15.0	19.0	19.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effct Green (s)	64.9	64.9	64.9	64.9	8.3	8.3
Actuated g/C Ratio	0.81	0.81	0.81	0.81	0.10	0.10
v/c Ratio	0.24	0.62	0.62	0.62	0.34	0.29
Control Delay	7.6	5.3	5.2	5.2	37.7	34.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.6	5.3	5.2	5.2	37.7	34.1
LOS	A	A	A	A	D	C
Approach Delay	5.3	5.2	5.2	5.2	36.1	
Approach LOS	A	A	A	A	D	



Proposed Westwood Mixed Use Neighborhood 2023 Background Conditions - PM Peak Hour
12: Sheridan Drive & I-290 NB

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	355	1259	0	0	1052	601	317	0	396	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	0	0	230	0	0	0	0	0	0
Storage Lanes	1	0	0	0	1	0	0	0	0	0	0
Taper Length (ft)	105	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	0.95	0.91	0.95	1.00	1.00
Flt Protected	0.950				0.945			0.894	0.850		
Satd. Flow (prot)	1770	5085	0	0	4806	0	1681	1493	1504	0	0
Flt Permitted	0.081						0.950	0.985			
Satd. Flow (perm)	151	5085	0	0	4806	0	1681	1493	1504	0	0
Right Turn on Red		Yes			Yes			Yes	Yes		Yes
Satd. Flow (RTOR)		45			146			53	53		30
Link Speed (mph)		45			45			30	30		30
Link Distance (ft)		610			193			830	830		423
Travel Time (s)		9.2			2.9			18.9	18.9		9.6
Peak Hour Factor	0.99	0.99	0.99	0.92	0.92	0.92	0.80	0.80	0.80	0.92	0.92
Adj. Flow (vph)	359	1272	0	0	1143	653	396	0	495	0	0
Shared Lane Traffic (%)							22%		42%		
Lane Group Flow (vph)	359	1272	0	0	1796	0	309	295	287	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Left	Right	Left	Right
Median Width(ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane											
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	15	2	9	15	15	9	15	9
Number of Detectors	1	2			2		1	2	1		1
Detector Template	Left	Thru			Thru		Left	Thru	Right		
Leading Detector (ft)	20	100			100		20	100	20		
Trailing Detector (ft)	0	0			0		0	0	0		
Detector 1 Position(ft)	0	0			0		0	0	0		
Detector 1 Size(ft)	20	6			6		20	6	20		
Detector 1 Type	Ch+Ex	Ch+Ex			Ch+Ex		Ch+Ex	Ch+Ex	Ch+Ex		
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0	0.0		
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0	0.0		
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0	0.0		
Detector 2 Position(ft)	94				94						
Detector 2 Size(ft)	6				6				6		
Detector 2 Type	Ch+Ex				Ch+Ex				Ch+Ex		
Detector 2 Channel											
Detector 2 Extend (s)	0.0				0.0				0.0		
Turn Type	pm+pt				custom				Perm		
Protected Phases	1	6			2		3	3	3		
Permitted Phases	6				3		3	3	3		
Detector Phase	1	6			2		3	3	3		

Lanes, Volumes, Timings
SRF & Associates

Proposed Westwood Mixed Use Neighborhood 2023 Background Conditions - PM Peak Hour
12: Sheridan Drive & I-290 NB

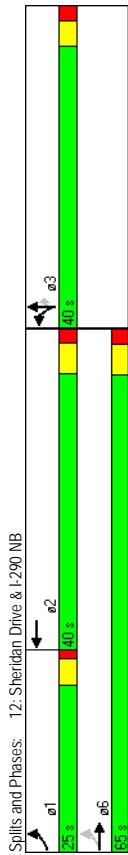
4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	1.0	4.0			4.0		4.0	4.0	4.0		4.0
Minimum Split (s)	6.2	33.9			27.8		29.0	29.0	29.0		29.0
Total Split (s)	25.0	65.0	0.0	0.0	40.0	0.0	40.0	40.0	40.0	0.0	0.0
Total Split (%)	23.8%	61.9%	0.0%	0.0%	38.1%	0.0%	38.1%	38.1%	38.1%	0.0%	0.0%
Maximum Green (s)	20.7	59.1			34.2		34.8	34.8	34.8		34.8
Yellow Time (s)	3.2	3.9			3.9		3.2	3.2	3.2		3.2
All-Red Time (s)	1.1	2.0			1.9		2.0	2.0	2.0		2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.3	5.9	4.0	4.0	5.8	4.0	5.2	5.2	5.2	4.0	4.0
Lead/Lag	Lead	Lag			Lag						
Vehicle Extension (s)	2.0	3.0			3.0		2.0	2.0	2.0		2.0
Recall Mode	None	C-Max			C-Max		None	None	None		None
Walk Time (s)	7.0				7.0						
Flash Dont Walk (s)	21.0				15.0						
Pedestrian Calls (#/hr)	0				0						
Act Effct Green (s)	70.1	68.5			45.2		25.4	25.4	25.4		25.4
Actuated g/C Ratio	0.67	0.65			0.43		0.24	0.24	0.24		0.24
v/c Ratio	0.90	0.38			0.84		0.76	0.74	0.71		0.71
Control Delay	54.8	9.7			31.0		48.6	40.2	38.5		38.5
Queue Delay	0.0	0.0			0.0		0.0	0.0	0.0		0.0
Total Delay	54.8	9.7			31.0		48.6	40.2	38.5		38.5
LOS	D	A			C		D	D	D		D
Approach Delay		19.6			31.0						42.5
Approach LOS		B			C						D

Intersection Summary

Area Type:	Other
Cycle Length:	105
Actuated Cycle Length:	105
Offset: 59 (56%), Referenced to phase 2:WBT and 6:EBTL, Start of Green	
Natural Cycle:	90
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.90
Intersection Signal Delay:	29.1
Intersection Capacity Utilization:	79.0%
Analysis Period (min):	15

Lanes, Volumes, Timings
SRF & Associates



Proposed Westwood Mixed Use Neighborhood 2023 Background Conditions - PM Peak Hour
13: Sheridan Drive & Harlem Road

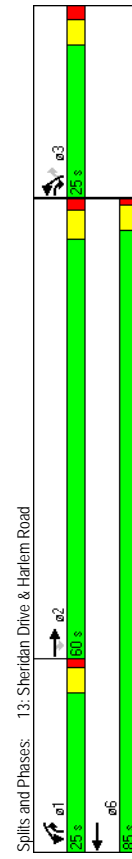
4/24/2014

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔	↔↔	↔↔	↔↔	↔↔
Volume (vph)	945	604	388	981	267	668
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	215	0	140	0	0
Storage Lanes	1	1	1	2	2	2
Taper Length (ft)	230	100	100	100	25	25
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	0.88
Flt Protected	0.850		0.950		0.850	
Satd. Flow (prot)	3539	1583	3433	3539	3433	2787
Flt Permitted	0.950		0.950		0.950	
Satd. Flow (perm)	3539	1583	3433	3539	3433	2787
Right Turn on Red	No					Yes
Satd. Flow (RTOR)						144
Link Speed (mph)	45		45		35	
Link Distance (ft)	314		610		338	
Travel Time (s)	4.8		9.2		6.6	
Peak Hour Factor	0.98	0.98	0.95	0.95	0.85	0.85
Adj. Flow (vph)	964	616	408	1033	314	786
Shared Lane Traffic (%)						
Lane Group Flow (vph)	964	616	408	1033	314	786
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Right	Right
Median Width (ft)	12		24		24	
Link Offset (ft)	0		0		0	
Crosswalk Width (ft)	16		16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15	15	15	15	9
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (ft)	100	20	20	100	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position (ft)	0	0	0	0	0	0
Detector 1 Size (ft)	6	20	20	6	20	20
Detector 1 Type	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position (ft)	94			94		
Detector 2 Size (ft)	6			6		
Detector 2 Type	Ch+Ex			Ch+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type		pm+ov	Prot		pm+ov	
Protected Phases	2	3	1	6	3	1
Permitted Phases	2	3	1	6	3	1
Detector Phase	2	3	1	6	3	1

Proposed Westwood Mixed Use Neighborhood 2023 Background Conditions - PM Peak Hour
13: Sheridan Drive & Harlem Road

4/24/2014

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Switch Phase	↔	↔	↔	↔	↔	↔
Minimum Initial (s)	1.0	1.0	1.0	4.0	1.0	1.0
Minimum Split (s)	30.5	6.2	5.3	32.3	6.2	5.3
Total Split (s)	60.0	25.0	25.0	85.0	25.0	25.0
Total Split (%)	54.5%	22.7%	22.7%	77.3%	22.7%	22.7%
Maximum Green (s)	54.5	19.8	20.7	80.7	19.8	20.7
Yellow Time (s)	3.9	3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.6	2.0	1.1	1.1	2.0	1.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.2	4.3	4.3	5.2	4.3
Lead/Lag	Lag	Lead	Lead	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	C-Max	None	None	None	None	None
Walk Time (s)	7.0		7.0		7.0	
Flash Dont Walk (s)	18.0		21.0		18.0	
Pedestrian Calls (#/hr)	0		0		0	
Act Effct Green (s)	62.6	82.8	17.7	85.8	14.7	37.6
Actuated g/C Ratio	0.57	0.75	0.16	0.78	0.13	0.34
v/c Ratio	0.48	0.52	0.74	0.37	0.68	0.75
Control Delay	16.1	7.8	52.2	4.5	53.0	30.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.1	7.8	52.2	4.5	53.0	30.1
LOS	B	A	D	A	D	C
Approach Delay	129		180		36.6	
Approach LOS	B		B		D	



Proposed Westwood Mixed Use Neighborhood 2023 Background Conditions - PM Peak Hour
4/24/2014
14: I-290 SB & Harlem Road

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	234	347	553	11	474	482
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	0	0	330	0
Storage Lanes	1	1	0	0	1	0
Taper Length (ft)	25	25	25	25	75	25
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Flt	0.850	0.997				
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	3529	0	1770	3539
Flt Permitted	0.950				0.177	
Satd. Flow (perm)	1770	1583	3529	0	330	3539
Right Turn on Red	Yes	Yes	Yes	Yes		
Satd. Flow (RTOR)	77	2				
Link Speed (mph)	30	35				35
Link Distance (ft)	333	250				456
Travel Time (s)	7.6	4.9				8.9
Peak Hour Factor	0.69	0.69	0.77	0.77	0.92	0.92
Adj. Flow (vph)	339	503	718	14	515	524
Shared Lane Traffic (%)						
Lane Group Flow (vph)	339	503	732	0	515	524
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12	12			12	12
Link Offset(ft)	0	0			0	0
Crosswalk Width(ft)	16	16			16	16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru	Left	Thru	
Leading Detector (ft)	20	20	100	20	100	
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	6	6
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			CI+EX			CI+EX
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type		pm+ov			pm+pl	
Protected Phases	3	1	2	1	1	6
Permitted Phases	3	1	2	2	6	6
Detector Phase	3	1	2	1	1	6

Proposed Westwood Mixed Use Neighborhood 2023 Background Conditions - PM Peak Hour
4/24/2014
14: I-290 SB & Harlem Road

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	9.2	30.6	9.2	21.0	21.0
Total Split (s)	40.0	35.0	50.0	0.0	35.0	85.0
Total Split (%)	32.0%	28.0%	40.0%	0.0%	28.0%	68.0%
Maximum Green (s)	35.2	30.7	45.0	30.7	80.0	80.0
Yellow Time (s)	3.2	3.2	3.6	3.2	3.6	3.6
All-Red Time (s)	1.6	1.1	1.4	1.1	1.4	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.8	4.3	5.0	4.0	4.3	5.0
Lead/Lag		Lead	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Min	None	None	None
Walk Time (s)			10.0			
Flash Dont Walk (s)			15.0			
Pedestrian Calls (#/hr)			0			
Act Effct Green (s)	23.2	52.9	26.3	56.2	55.5	55.5
Actuated g/C Ratio	0.26	0.59	0.30	0.63	0.62	0.62
v/c Ratio	0.74	0.52	0.70	0.85	0.24	0.24
Control Delay	42.5	11.4	33.4	33.2	8.2	8.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.5	11.4	33.4	33.2	8.2	8.2
LOS	D	B	C	C	A	A
Approach Delay	23.9	33.4	33.4	20.6	20.6	20.6
Approach LOS	C	C	C	C	C	C

Intersection Summary

Area Type: Other

Cycle Length: 125

Actuated Cycle Length: 89.1

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

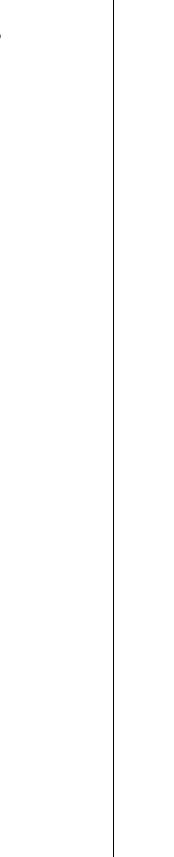
Maximum v/c Ratio: 0.85

Intersection Signal Delay: 25.2

Intersection Capacity Utilization: 66.6%

Analysis Period (min): 15

Spills and Phases: 14: I-290 SB & Harlem Road



A6

**Level of Service Calculations:
Full Development Conditions**

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
 1: Maple Road & Millersport Hwy SB

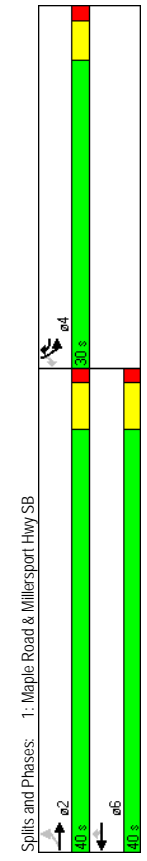
4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (vph)	18	612	831	312	31	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	0	0	0	0	0
Storage Lanes	1	1	1	1	1	1
Taper Length (ft)	35	100	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00
Flt Protected	0.950			0.850	0.850	
Satd. Flow (prot)	1770	3539	3539	1583	1770	1583
Flt Permitted	0.323			0.950		
Satd. Flow (perm)	602	3539	3539	1583	1770	1583
Right Turn on Red				Yes	Yes	Yes
Satd. Flow (RTOR)		45	45		30	106
Link Speed (mph)		555	654		281	
Link Distance (ft)		8.4	9.9		6.4	
Travel Time (s)		0.91	0.96	0.96	0.78	0.78
Peak Hour Factor		20	673	866	325	40
Adj. Flow (vph)		20	673	866	325	40
Shared Lane Traffic (%)						
Lane Group Flow (vph)		20	673	866	325	40
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Right
Median Width(ft)		12	12	12	12	12
Link Offset(ft)		0	0	0	0	0
Crosswalk Width(ft)		16	16	16	16	16
Two way Left Turn Lane		Yes				
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	2	2	9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94	94	94			
Detector 2 Size(ft)	6	6	6			
Detector 2 Type	CI+EX	CI+EX	CI+EX			
Detector 2 Channel						
Detector 2 Extend (s)	0.0	0.0	0.0			
Turn Type	Perm			pm+ov	Perm	
Protected Phases	2	6	6	4	4	
Permitted Phases	2	2	6	4	4	4
Detector Phase	2	2	6	4	4	4

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
 1: Maple Road & Millersport Hwy SB

4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	1.0	1.0	1.0
Minimum Split (s)	9.1	9.1	9.1	6.2	6.2	6.2
Total Split (s)	40.0	40.0	40.0	30.0	30.0	30.0
Total Split (%)	57.1%	57.1%	57.1%	42.9%	42.9%	42.9%
Maximum Green (s)	34.9	34.9	34.9	25.4	25.4	25.4
Yellow Time (s)	3.9	3.9	3.9	3.2	3.2	3.2
All-Red Time (s)	1.2	1.2	1.2	1.4	1.4	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	4.6	4.6	4.6
Lead-Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Min	C-Min	C-Min	None	None	None
Act Effct Green (s)	52.7	52.7	70.0	7.6	7.6	7.6
Actuated g/C Ratio	0.75	0.75	1.00	0.11	0.11	0.11
v/c Ratio	0.04	0.25	0.33	0.21	0.21	0.40
Control Delay	2.9	3.1	5.9	0.3	30.2	11.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.9	3.1	5.9	0.3	30.2	11.3
LOS	A	A	A	A	C	B
Approach Delay		3.1	4.3		16.4	
Approach LOS		A	A		B	
Intersection Summary						
Area Type:	Other					
Cycle Length:	70					
Offset:	5 (7%), Referenced to phase 2:EBTL and 6:WBT. Start of Green					
Natural Cycle:	40					
Control Type:	Actuated-Coordinated					
Maximum v/c Ratio:	0.40					
Intersection Signal Delay:	4.8					
Intersection LOS:	A					
ICU Level of Service:	A					
Analysis Period (min)	15					



Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
 2: Maple Road & Millersport Hwy NB

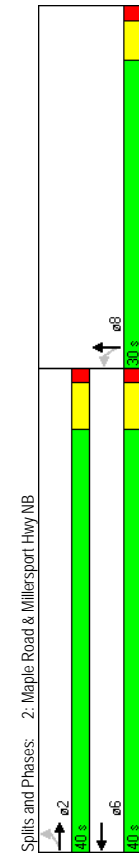
4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	42	601	0	0	996	57	147	1	466	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	0	0	0	0	0	0	0	0	0
Storage Lanes	1	0	0	0	0	0	1	0	0	0	0
Taper Length (ft)	50	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.950				0.992		0.850				
Satd. Flow (prot)	1770	3539	0	0	3511	0	1770	1583	0	0	0
Flt Permitted	0.185				0.950		0.950				
Satd. Flow (perm)	345	3539	0	0	3511	0	1770	1583	0	0	0
Right Turn on Red		Yes			Yes		Yes	Yes			Yes
Satd. Flow (RTOR)		12			12		170				30
Link Speed (mph)	45				45		30				263
Link Distance (ft)	654				1770		319				7.3
Travel Time (s)	9.9				26.8		7.3				6.0
Peak Hour Factor	0.85	0.85	0.85	0.93	0.93	0.93	0.93	0.93	0.93	0.92	0.92
Adj. Flow (vph)	49	707	0	0	1071	61	158	1	501	0	0
Shared Lane Traffic (%)											
Lane Group Flow (vph)	49	707	0	0	1132	0	158	502	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Left	Right	Left	Right
Median Width(ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane	Yes				Yes						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	15	9	15	15	9	15	15	9
Number of Detectors	1	2			2		1	2			
Detector Template	Left	Thru			Thru		Left	Thru			
Leading Detector (ft)	20	100			100		20	100			
Trailing Detector (ft)	0	0			0		0	0			
Detector 1 Position(ft)	0	0			0		0	0			
Detector 1 Size(ft)	20	6			6		20	6			
Detector 1 Type	CI+EX	CI+EX			CI+EX		CI+EX	CI+EX			
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0			
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0			
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0			
Detector 2 Position(ft)	94				94		94				
Detector 2 Size(ft)	6	6			6		6	6			
Detector 2 Type	CI+EX	CI+EX			CI+EX		CI+EX	CI+EX			
Detector 2 Channel											
Detector 2 Extend (s)	0.0	0.0			0.0		0.0	0.0			
Turn Type	Perm				Perm		Perm				
Protected Phases	2				6		8				
Permitted Phases	2				6		8				
Detector Phase	2				6		8				

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
 2: Maple Road & Millersport Hwy NB

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	1.0	1.0			4.0		1.0	1.0			
Minimum Split (s)	6.1	6.1			9.1		6.2	6.2			
Total Split (s)	40.0	40.0	0.0	0.0	40.0	0.0	30.0	30.0	0.0	0.0	0.0
Total Split (%)	57.1%	57.1%	0.0%	0.0%	57.1%	0.0%	42.9%	42.9%	0.0%	0.0%	0.0%
Maximum Green (s)	34.9	34.9			34.9		25.4	25.4			
Yellow Time (s)	3.9	3.9			3.9		3.2	3.2			
All-Red Time (s)	1.2	1.2			1.2		1.4	1.4			
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	4.0	4.0	5.1	4.0	4.6	4.6	4.0	4.0	4.0
Lead-Lag											
Lead-Lag Optimize?											
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0			
Recall Mode	C-Min	C-Min			C-Min		None	None			
Act Effct Green (s)	39.0	39.0			39.0		21.3	21.3			
Actuated g/C Ratio	0.56	0.56			0.56		0.30	0.30			
v/c Ratio	0.26	0.36			0.58		0.29	0.84			
Control Delay	15.8	10.7			12.6		18.6	27.6			
Queue Delay	0.0	0.0			0.0		0.0	0.0			
Total Delay	15.8	10.7			12.6		18.6	27.6			
LOS	B	B			B		B	C			
Approach Delay											
Approach LOS	B	B			B		B	C			
Intersection Summary											
Area Type:	Other										
Cycle Length:	70										
Offset:	5 (7%), Referenced to phase 2:EBTL and 6:WBT, Start of Green										
Natural Cycle:	50										
Control Type:	Actuated-Coordinated										
Maximum v/c Ratio:	0.84										
Intersection Signal Delay:	15.5										
Intersection LOS:	B										
Intersection Capacity Utilization:	71.9%										
Analysis Period (min):	15										



Splits and Phases: 2: Maple Road & Millersport Hwy NB

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
 3: Maple Road & Maplemere Road

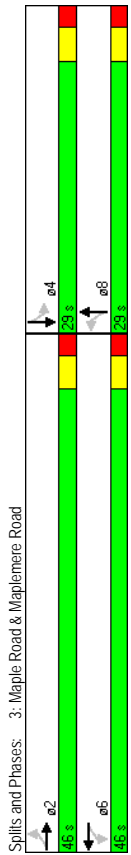
4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	21	931	46	12	1044	28	43	3	16	34	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	70	0	0	0	0	0	0	0	0
Storage Lanes	1	0	1	0	0	0	0	0	0	0	0
Taper Length (ft)	50	25	50	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Flt Permitted	0.950	0.993	0.950	0.996	0.950	0.965	0.967	0.967	0.957	0.957	0.957
Satd. Flow (prot)	1770	3514	0	1770	3525	0	1738	0	1738	0	1724
Flt Permitted	0.204	0.217	0.217	0.217	0.217	0.217	0.217	0.217	0.217	0.217	0.217
Right Turn on Red	380	3514	0	404	3525	0	1328	0	1307	0	1307
Satd. Flow (RTOR)	10	Yes	6	Yes	6	Yes	25	Yes	28	Yes	28
Link Speed (mph)	45	45	45	45	45	45	30	30	30	30	30
Link Distance (ft)	26.8	26.8	26.8	26.8	26.8	26.8	8.6	8.6	9.1	9.1	9.1
Travel Time (s)	0.86	0.86	0.86	0.91	0.91	0.91	0.60	0.60	0.60	0.58	0.58
Peak Hour Factor	24	1083	53	13	1147	31	72	5	27	59	0
Adj. Flow (vph)	24	1136	0	13	1178	0	104	0	104	0	87
Lane Group Flow (vph)	No	No	No	No	No	No	No	No	No	No	No
Enter Blocked Intersection	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Lane Alignment	12	12	12	12	12	12	0	0	0	0	0
Median Width(ft)	16	16	16	16	16	16	16	16	16	16	16
Link Offset(ft)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Crosswalk Width(ft)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Headway Factor	15	9	15	9	15	9	15	9	15	9	15
Turning Speed (mph)	1	2	1	2	1	2	1	2	1	2	1
Number of Detectors	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left
Detector Template	20	100	20	100	20	100	20	100	20	100	20
Leading Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	6	20	6	20	6	20	6	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94	94	94	94	94	94	94	94	94	94	94
Detector 2 Size(ft)	6	6	6	6	6	6	6	6	6	6	6
Detector 2 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 2 Channel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Extend (s)	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm
Turn Type	2	2	2	2	2	2	2	2	2	2	2
Protected Phases	8	8	8	8	8	8	8	8	8	8	8
Permitted Phases	4	4	4	4	4	4	4	4	4	4	4
Detector Phase	2	2	2	2	2	2	2	2	2	2	2

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
 3: Maple Road & Maplemere Road

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	9.0	9.0	9.0	9.0	9.0	27.0	27.0	27.0	27.0	27.0
Minimum Split (%)	46.0	46.0	46.0	46.0	46.0	46.0	0.0	29.0	29.0	0.0	29.0
Total Split (s)	61.3%	61.3%	61.3%	61.3%	61.3%	61.3%	38.7%	38.7%	38.7%	38.7%	38.7%
Total Split (%)	41.0	41.0	41.0	41.0	41.0	41.0	24.0	24.0	24.0	24.0	24.0
Maximum Green (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Yellow Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead-Lag Optimize?											
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	None	None	None	None	None
Recall Mode	Min	Min	Min	Min	Min	Min	None	None	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0	0	0	0
Act Effct Green (s)	27.4	27.4	27.4	27.4	27.4	27.4	8.5	8.5	8.5	8.5	8.5
Actuated g/C Ratio	0.65	0.65	0.65	0.65	0.65	0.65	0.20	0.20	0.20	0.20	0.20
v/c Ratio	0.10	0.49	0.05	0.51	0.05	0.51	0.36	0.36	0.36	0.36	0.36
Control Delay	6.1	6.5	5.4	6.7	5.4	6.7	16.6	16.6	16.6	16.6	14.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.1	6.5	5.4	6.7	5.4	6.7	16.6	16.6	16.6	16.6	14.9
LOS	A	A	A	A	A	A	B	B	B	B	B
Approach Delay	6.5	6.5	6.7	6.7	6.5	6.7	16.6	16.6	16.6	16.6	14.9
Approach LOS	A	A	A	A	A	A	B	B	B	B	B
Intersection Summary	Other										
Area Type:	Other										
Cycle Length:	75										
Actuated Cycle Length:	41.9										
Natural Cycle:	55										
Control Type:	Actuated-Uncoordinated										
Maximum v/c Ratio:	0.51										
Intersection Signal Delay:	7.3										
Intersection Capacity Utilization:	42.2%										
Analysis Period (min):	15										



Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
4: Maple Road & Donna Lea Blvd

4/24/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔↔	↔↔	↔↔	↔↔	↔↔
Volume (vph)	976	6	13	1059	24	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	50	0	0	0	0
Storage Lanes	0	1	0	1	0	0
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Flt Protected	0.999		0.950		0.904	
Flt Permitted			0.950		0.986	
Satd. Flow (prot)	3536	0	1770	3539	1660	0
Satd. Flow (perm)	3536	0	1770	3539	1660	0
Link Speed (mph)	45		45		30	
Link Distance (ft)	1106		1002		355	
Travel Time (s)	16.8		15.2		8.1	
Peak Hour Factor	0.79	0.79	0.87	0.87	0.76	0.76
Adj. Flow (vph)	1235	8	15	1217	32	80
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1243	0	15	1217	112	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12		12		12	
Link Offset(ft)	0		0		0	
Crosswalk Width(ft)	16		16		16	
Two way Left Turn Lane	Yes		Yes		Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15	15	15	15	9
Sign Control	Free	Free	Free	Free	Stop	Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	41.0%					
Analysis Period (min)	15					
ICU Level of Service:	A					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
4: Maple Road & Donna Lea Blvd

4/24/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔↔	↔↔	↔↔	↔↔	↔↔
Volume (veh/h)	976	6	13	1059	24	61
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%		0%		0%	
Peak Hour Factor	0.79	0.79	0.87	0.87	0.76	0.76
Hourly flow rate (vph)	1235	8	15	1217	32	80
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLT		TWLT		2	
Median storage (veh)	2		2		2	
Upstream signal (ft)	1106		1106		639	
pX, platoon unblocked			0.85		0.85	0.85
vC, conflicting volume			1243		1878	622
vC1, stage 1 conf vol					1239	
vC2, stage 2 conf vol					639	
vCu, unblocked vol			930		1678	197
IC, single (s)			4.1		6.8	6.9
IC, 2 stage (s)					5.8	
IF (s)			2.2		3.5	3.3
p0 queue free %			98		87	88
cM capacity (veh/h)			621		251	688
Direction, Lane #						
EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	NB 2
824	419	15	609	609	112	112
Volume Total	0	0	15	0	0	32
Volume Left	0	8	0	0	0	80
Volume Right	1700	1700	621	1700	1700	462
cSH	0.48	0.25	0.02	0.36	0.36	0.24
Volume to Capacity	0	0	2	0	0	23
Queue Length 95th (ft)	0.0	0.0	10.9	0.0	0.0	15.3
Control Delay (s)	0.0	0.0	0.1	0.0	0.0	15.3
Lane LOS			B		C	C
Approach Delay (s)	0.0	0.1	0.1	0.0	15.3	0.0
Approach LOS			C		C	C
Intersection Summary						
Average Delay	0.7					
Intersection Capacity Utilization	41.0%					
ICU Level of Service	A					
Analysis Period (min)	15					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
5: Maple Road & Audubon Golf Club

4/24/2014



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	1	1075	4	1	1126	2	13	0	0	3	0
Volume (vph)	1	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	100	0	50	0	50	0	0	0	0	0	0
Storage Length (ft)	1	0	1	0	1	0	0	0	0	0	0
Storage Lanes	25	25	25	25	25	25	25	25	25	25	25
Taper Length (ft)	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.999						0.976				
Flt Protected	0.950			0.950			0.960				0.950
Satd. Flow (prot)	1770	3536	0	1770	3539	0	1745	0	1745	0	1770
Flt Permitted	0.950			0.950			0.960				0.950
Satd. Flow (perm)	1770	3536	0	1770	3539	0	1745	0	1745	0	1770
Link Speed (mph)	45	45	45	45	45	45	30	30	30	30	30
Link Distance (ft)	446	446	446	556	556	469	469	111	111	111	111
Travel Time (s)	6.8	6.8	6.8	8.4	8.4	10.7	10.7	2.5	2.5	2.5	2.5
Adj. Flow (vph)	1	1168	4	1	1224	2	14	0	3	1	0
Shared Lane Traffic (%)											
Lane Group Flow (vph)	1	1172	0	1	1226	0	0	17	0	0	1
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Right
Median Width (ft)	12	12	12	12	12	12	0	0	0	0	0
Link Offset (ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width (ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane	Yes			Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9	15	9	15	9	15
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop
Intersection Summary											
Area Type:	Other										
Control Type:	Unsignalized										
Intersection Capacity Utilization	41.2%										
Analysis Period (min)	15										

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
5: Maple Road & Audubon Golf Club

4/24/2014



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	1	1075	4	1	1126	2	13	0	3	1	0
Volume (veh/h)	1	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop
Grade	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Peak Hour Factor	1	1168	4	1	1224	2	14	0	3	1	0
Hourly flow rate (vph)	1	1168	4	1	1224	2	14	0	3	1	0
Pedestrians											
Lane Width (ft)											
Walking Speed (ft/s)											
Percent Blockage											
Right turn flare (veh)											
Median type											
Median storage (veh)											
Upstream signal (ft)											
pX, platoon unblocked											
vC, conflicting volume	1226		1173				1787	2401	586	1817	2402
vC1, stage 1 cont vol							1173	1173	1227	1227	
vC2, stage 2 cont vol							614	1228	590	1175	
vCu, unblocked vol	1226		1173				1787	2401	586	1817	2402
IC, single (s)	4.1		4.1				7.5	6.5	6.9	7.5	6.5
IC, 2 stage (s)							6.5	5.5	6.5	5.5	
IF (s)	2.2		2.2				3.5	4.0	3.3	3.5	4.0
p0 queue free %	100		100				92	100	99	99	100
cM capacity (veh/h)	564		591				184	177	453	173	177
Direction, Lane #											
EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1				
1	779	394	1	816	410	17	1				
Volume Total	1	0	0	1	0	0	14	1			
Volume Left	0	0	4	0	0	2	3	0			
cSH	564	1700	1700	591	1700	1700	207	173			
Volume to Capacity	0.00	0.46	0.23	0.00	0.48	0.24	0.08	0.01			
Queue Length 95th (ft)	0	0	0	0	0	0	7	0			
Control Delay (s)	11.4	0.0	0.0	11.1	0.0	0.0	23.9	25.9			
Lane LOS	B			B			C	D			
Approach Delay (s)	0.0			0.0			23.9	25.9			
Approach LOS				C			C	D			
Intersection Summary											
Average Delay	0.2										
Intersection Capacity Utilization	41.2%										
Analysis Period (min)	15										

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
6: Maple Road & North Forest Road

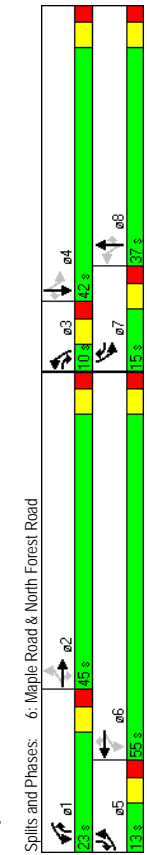
4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	102	866	84	253	836	90	92	231	185	123	363
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	415	220	315	220	315	150	125	220	250	250	250
Storage Lanes	1	1	1	1	1	1	1	1	1	1	1
Taper Length (ft)	90	115	60	25	95	25	95	25	90	90	25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.950		0.950		0.850		0.850		0.850		0.850
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1863	1583	1770	1863
Flt Permitted	0.247		0.098		0.198		0.198		0.353		0.353
Satd. Flow (perm)	460	3539	1583	183	3539	1583	369	1863	1583	658	1863
Right Turn on Red	Yes		Yes		No		No	Yes	Yes	Yes	Yes
Satd. Flow (RTOR)		91						52			76
Link Speed (mph)	45		45		45		35		35		35
Link Distance (ft)	1705		820		529		608		608		608
Travel Time (s)	25.8		12.4		10.3		11.8		11.8		11.8
Peak Hour Factor	0.90	0.90	0.95	0.95	0.95	0.95	0.90	0.90	0.90	0.80	0.80
Adj. Flow (vph)	113	962	93	266	880	95	102	257	206	154	454
Shared Lane Traffic (%)											
Lane Group Flow (vph)	113	962	93	266	880	95	102	257	206	154	454
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Left	Right	Left	Right
Median Width(ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane	Yes		Yes		Yes		Yes		Yes		Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	2	1	2	1	2	1	15	15
Number of Detectors	1	2	1	1	1	1	1	2	1	1	2
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru
Leading Detector (ft)	20	100	20	100	20	100	20	100	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6
Detector 1 Type	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94		94		94		94		94		94
Detector 2 Size(ft)	6		6		6		6		6		6
Detector 2 Type	Ch+Ex		Ch+Ex		Ch+Ex		Ch+Ex		Ch+Ex		Ch+Ex
Detector 2 Channel											
Detector 2 Extend (s)	0.0		0.0		0.0		0.0		0.0		0.0
Turn Type	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt
Protected Phases	5	2	3	1	6	7	3	8	1	7	4
Permitted Phases	2	2	6	6	6	8	8	8	4	4	4
Detector Phase	5	2	3	1	6	7	3	8	1	7	4

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
6: Maple Road & North Forest Road

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	1.0	4.0	1.0	1.0	4.0	1.0	1.0	4.0	1.0	1.0	4.0
Minimum Split (s)	7.0	35.0	7.0	7.0	35.0	7.0	7.0	35.0	7.0	7.0	35.0
Total Split (s)	13.0	45.0	10.0	23.0	55.0	15.0	10.0	37.0	23.0	15.0	42.0
Total Split (%)	10.8%	37.5%	8.3%	19.2%	45.8%	12.5%	8.3%	30.8%	19.2%	12.5%	35.0%
Maximum Green (s)	7.0	39.0	4.0	17.0	49.0	9.0	4.0	31.0	17.0	9.0	36.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Walk Time (s)	7.0		7.0		7.0		7.0		7.0		7.0
Flash Dont Walk (s)	22.0		22.0		22.0		22.0		22.0		22.0
Pedestrian Calls (#/hr)	0		0		0		0		0		0
Act Effct Green (s)	41.7	34.7	44.9	56.1	43.3	58.3	30.0	25.9	47.7	39.6	30.7
Actuated g/C Ratio	0.38	0.32	0.41	0.51	0.40	0.53	0.27	0.24	0.44	0.36	0.28
v/c Ratio	0.44	0.86	0.13	0.83	0.63	0.11	0.67	0.58	0.29	0.47	0.87
Control Delay	21.4	44.6	5.3	49.5	29.2	13.9	50.8	43.7	16.2	29.8	56.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.4	44.6	5.3	49.5	29.2	13.9	50.8	43.7	16.2	29.8	56.3
LOS	C	D	A	D	C	B	D	D	B	C	E
Approach Delay	39.2		32.4		32.4		35.0		35.0		40.6
Approach LOS	D		C		C		C		C		D



Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
7: Sheridan Drive & Mill Street

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	6	1343	130	220	1060	9	106	21	125	30	146
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	100	0	150	0	150	0	40	0	75	0	75
Storage Length (ft)	1	0	1	0	1	0	1	0	1	0	1
Storage Lanes	65	25	60	25	60	25	25	25	25	25	25
Taper Length (ft)	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.987			0.999			0.872			0.983	
Flt Protected	0.950			0.950			0.950			0.950	
Satd. Flow (prot)	1770	3493	0	1770	3536	0	1770	1624	0	1770	1831
Flt Permitted	0.217			0.080			0.231			0.598	
Satd. Flow (perm)	404	3493	0	149	3536	0	430	1624	0	1114	1831
Right Turn on Red							Yes		No		Yes
Satd. Flow (RTOR)							1				5
Link Speed (mph)	45			45			45		30		30
Link Distance (ft)	2782			977			838		362		362
Travel Time (s)	42.2			14.8			19.0		8.2		8.2
Peak Hour Factor	0.86	0.86	0.86	0.89	0.89	0.89	0.56	0.56	0.56	0.61	0.61
Adj. Flow (vph)	7	1562	151	247	1191	10	189	38	223	49	239
Shared Lane Traffic (%)											
Lane Group Flow (vph)	7	1713	0	247	1201	0	189	261	0	49	270
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Median Width (ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset (ft)	0			0			0		0		0
Crosswalk Width (ft)	16			16			16		16		16
Two way Left Turn Lane	Yes			Yes			Yes		Yes		Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	15	9	15	15	9	15	15	9
Number of Detectors	1	2	1	2	1	2	1	2	1	2	1
Detector Template	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left
Leading Detector (ft)	20	100	20	100	20	100	20	100	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size (ft)	20	6	20	6	20	6	20	6	20	6	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position (ft)	94	0.0	94	0.0	94	0.0	94	0.0	94	0.0	94
Detector 2 Size (ft)	6	6	6	6	6	6	6	6	6	6	6
Detector 2 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 2 Channel											
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm			pm+pt			pm+pt		Perm		Perm
Protected Phases	2	2	6	6	6	6	8	8	4	4	4
Permitted Phases	2	2	1	6	1	6	3	8	4	4	4
Detector Phase	2	2	1	6	1	6	3	8	4	4	4

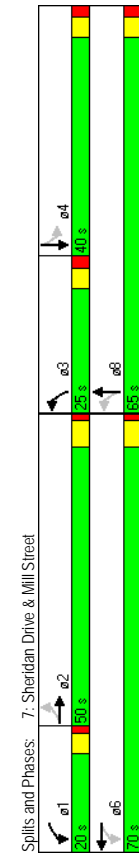
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
7: Sheridan Drive & Mill Street

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase	4.0	4.0	1.0	4.0	4.0	1.0	4.0	4.0	4.0	4.0	4.0
Minimum Initial (s)	28.3	28.3	6.2	28.3	6.2	28.3	6.2	34.2	34.2	34.2	34.2
Minimum Split (s)	50.0	50.0	0.0	20.0	70.0	0.0	25.0	65.0	0.0	40.0	40.0
Total Split (s)	37.0%	37.0%	0.0%	14.8%	51.9%	0.0%	18.5%	48.1%	0.0%	29.6%	29.6%
Total Split (%)	44.5	44.5	15.7	64.5	19.8	59.8	34.8	34.8	34.8	34.8	34.8
Maximum Green (s)	4.3	4.3	3.2	4.3	3.2	4.3	3.2	3.2	3.2	3.2	3.2
Yellow Time (s)	1.2	1.2	1.1	1.2	1.1	1.2	2.0	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	5.5	5.5	4.0	4.3	5.5	4.0	5.2	5.2	4.0	5.2	5.2
Total Lost Time (s)	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead/Lag	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Lead-Lag Optimize?	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Vehicle Extension (s)	Max	Max	None	Max	None	Max	None	None	None	None	None
Recall Mode	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Walk Time (s)	15.0	15.0	15.0	15.0	15.0	15.0	22.0	22.0	22.0	22.0	22.0
Flash Dont Walk (s)	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Calls (#/hr)	45.4	45.4	66.1	64.9	41.9	41.9	41.9	41.9	22.3	22.3	22.3
Act Effct Green (s)	0.39	0.39	0.56	0.55	0.36	0.36	0.19	0.19	0.19	0.19	0.19
Actuated g/C Ratio	0.04	1.27	0.84	0.62	0.60	0.45	0.23	0.77	0.23	0.77	0.77
v/c Ratio	28.8	160.0	54.8	21.1	34.6	31.0	43.2	59.5	43.2	59.5	59.5
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	288	160.0	54.8	21.1	34.6	31.0	43.2	59.5	43.2	59.5	59.5
Total Delay	C	F	D	C	C	C	C	C	C	D	E
LOS	159.5	F	26.9	C	32.5	C	57.0	E	57.0	E	E
Approach Delay	159.5	F	26.9	C	32.5	C	57.0	E	57.0	E	E
Approach LOS	F	F	C	C	C	C	E	E	E	E	E



Spills and Phases: 7: Sheridan Drive & Mill Street

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
8: Sheridan Drive & North Forest Road

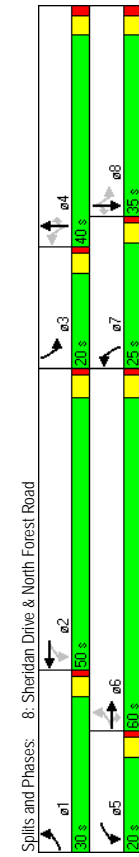
4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	94	1367	223	181	1119	19	242	342	23	11	444
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	405	170	260	0	180	0	265	180	200	200	200
Storage Lanes	1	1	1	0	1	0	1	1	1	1	1
Taper Length (ft)	200	25	200	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.95	1.00
Flt	0.850	0.850	0.997				0.850			0.850	0.850
Flt Protected	0.950		0.950		0.950		0.950			0.950	
Satd. Flow (prot)	1770	3539	1583	1770	3529	0	1770	1863	1583	1770	3539
Flt Permitted	0.089		0.067		0.193		0.498			0.498	
Satd. Flow (perm)	166	3539	1583	125	3529	0	360	1863	1583	928	3539
Right Turn on Red	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Satd. Flow (RTOR)	102		102		1		26		26		322
Link Speed (mph)	45		45		45		40		40		35
Link Distance (ft)	969		2219		547		354		354		6.9
Travel Time (s)	14.7		33.6		9.3		6.9		6.9		0.498
Peak Hour Factor	0.95	0.95	0.92	0.92	0.92	0.92	0.90	0.90	0.90	0.84	0.84
Adj. Flow (vph)	99	1439	235	197	1237	21	269	380	26	13	529
Shared Lane Traffic (%)											
Lane Group Flow (vph)	99	1439	235	197	1237	0	269	380	26	13	529
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Median Width (ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset (ft)	0		0		0		0		0		0
Crosswalk Width (ft)	16		16		16		16		16		16
Two way Left Turn Lane	Yes		Yes		Yes		Yes		Yes		Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9	15	9	15	9	15
Number of Detectors	1	2	1	2	1	2	1	2	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru
Leading Detector (ft)	20	100	20	100	20	100	20	100	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size (ft)	20	6	20	6	20	6	20	6	20	6	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position (ft)	94		94		94		94		94		94
Detector 2 Size (ft)	6		6		6		6		6		6
Detector 2 Type	CI+EX		CI+EX		CI+EX		CI+EX		CI+EX		CI+EX
Detector 2 Channel											
Detector 2 Extend (s)	0.0		0.0		0.0		0.0		0.0		0.0
Turn Type	pm+pt	Perm	pm+pt	Perm	pm+pt	Perm	pm+pt	Perm	pm+pt	Perm	pm+pt
Protected Phases	1	6	5	2	7	4	3	8			
Permitted Phases	6	6	6	2	4	4	4	8	8	8	8
Detector Phase	1	6	6	5	2	7	4	4	4	3	8

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
8: Sheridan Drive & North Forest Road

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.3	27.9	27.9	8.3	27.9	8.3	27.9	21.0	27.2	27.2	8.3
Total Split (s)	30.0	60.0	60.0	20.0	50.0	0.0	25.0	40.0	40.0	20.0	35.0
Total Split (%)	21.4%	42.9%	42.9%	14.3%	35.7%	0.0%	17.9%	28.6%	28.6%	14.3%	25.0%
Maximum Green (s)	25.7	54.9	54.9	15.7	44.9		20.7	34.9	34.9	15.7	29.9
Yellow Time (s)	3.2	3.9	3.9	3.2	3.9		3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.1	1.2	1.1	1.2	1.1		1.1	1.1	1.1	1.1	1.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.3	5.1	5.1	4.3	5.1		4.3	5.1	5.1	4.3	5.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	None	Max	None		None	None	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0	15.0	15.0	15.0		15.0	15.0	15.0	15.0	15.0
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0	0	0	0
Act Effct Green (s)	65.3	55.1	55.1	73.7	59.8		50.7	45.6	45.6	32.9	25.9
Actuated g/C Ratio	0.49	0.41	0.41	0.55	0.45		0.38	0.34	0.34	0.25	0.19
v/c Ratio	0.51	0.99	0.33	0.81	0.78		0.78	0.60	0.05	0.05	0.62
Control Delay	26.9	59.9	17.1	58.6	37.0		47.0	42.2	11.7	27.4	59.5
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	26.9	59.9	17.1	58.6	37.0		47.0	42.2	11.7	27.4	59.5
LOS	C	E	B	E	D		D	D	B	C	E
Approach Delay	52.4		39.9		D		43.0		D		40.4
Approach LOS	D		D		D		D		D		D
Intersection Summary	Other										
Area Type:	Other										
Cycle Length:	140										
Actuated Cycle Length:	133.6										
Natural Cycle:	105										
Control Type:	Actuated-Uncoordinated										
Maximum v/c Ratio:	0.99										
Intersection Signal Delay:	45.1										
Intersection Capacity Utilization:	89.2%										
Analysis Period (min):	15										



Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
10: Sheridan Drive & Proposed South Driveway 4/24/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	214	1591	6	4	1523	107	16	0	9	110	0
Ideal Flow (vpph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	350	0	75	0	0	0	0	0	0	0	0
Storage Lanes	1	0	1	0	0	0	0	0	0	0	1
Taper Length (ft)	25	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Flt	0.950	0.999	0.950	0.990	0.950	0.951	0.969	0.950	0.950	0.950	0.850
Flt Protected	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950
Satd. Flow (prot)	1770	3536	0	1770	3504	0	0	1770	0	0	1770
Flt Permitted	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950
Satd. Flow (perm)	1770	3536	0	1770	3504	0	0	1770	0	0	1770
Link Speed (mph)	45	635	0	45	699	0	30	30	278	269	6.1
Link Distance (ft)	9.6	10.6	0	10.6	6.3	6.3	6.1	6.1	6.3	6.1	6.1
Travel Time (s)	233	1815	0	4	1808	0	0	36	0	0	120
Adj. Flow (vph)	233	1808	7	4	1692	116	23	0	13	120	0
Shared Lane Traffic (%)	0.92	0.88	0.88	0.90	0.90	0.92	0.69	0.92	0.69	0.92	0.92
Lane Group Flow (vph)	No	No	No	No	No	No	No	No	No	No	No
Enter Blocked Intersection	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left
Lane Alignment	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left
Median Width (ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset (ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width (ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9	15	9	15	9	15
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free
Intersection Summary											
Area Type:	Other										
Control Type:	Unsignalized										
Intersection Capacity Utilization	76.0%										
Analysis Period (min)	15										
ICU Level of Service:	D										

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
10: Sheridan Drive & Proposed South Driveway 4/24/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (veh/h)	214	1591	6	4	1523	107	16	0	9	110	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.88	0.88	0.90	0.90	0.92	0.69	0.92	0.69	0.92	0.92
Hourly flow rate (vph)	233	1808	7	4	1692	116	23	0	13	120	0
Pedestrians											
Lane Width (ft)											
Walking Speed (ft/s)											
Percent Blockage											
Right turn flare (veh)											
Median type											
Median storage (veh)	2										
Upstream signal (ft)	635										
pX, platoon unblocked	0.71										
vC, conflicting volume	1809										
vC1, stage 1 conf vol	2277										
vC2, stage 2 conf vol	1027										
vCu, unblocked vol	1809										
IC, single (s)	4.1										
IC, 2 stage (s)	7.5										
IF (s)	6.5										
p0 queue free %	2.2										
cM capacity (veh/h)	31										
Direction, Lane #	EB1	EB2	EB3	WB1	WB2	WB3	NB1	SB1	SB2		
Volume Total	233	1205	609	4	1128	680	36	120	172		
Volume Left	233	0	0	4	0	0	23	120	0		
cSH	0	0	7	0	0	116	13	0	172		
Volume to Capacity	336	1700	1700	366	1700	1700	1	54	280		
Queue Length 95th (ft)	0.69	0.71	0.36	0.01	0.66	0.40	72.31	2.20	0.61		
Control Delay (s)	122	0	0	1	0	0	Err	298	93		
Lane LOS	E	E	B	B	B	B	F	F	F		
Approach Delay (s)	4.2			0.0			Err	315.1			
Approach LOS				F			F				
Intersection Summary											
Average Delay	110.5										
Intersection Capacity Utilization	76.0%										
ICU Level of Service	D										
Analysis Period (min)	15										

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
11: Sheridan Drive & Frankhauser Road

4/24/2014



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (vph)	26	1772	1673	24	38	29
Ideal Flow (vppf)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105	0	0	0	0	50
Storage Lanes	1	0	0	0	1	1
Taper Length (ft)	65	25	25	25	25	25
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Flt Protected	0.950	0.998			0.950	0.850
Satd. Flow (prot)	1770	3539	3532	0	1770	1583
Flt Permitted	0.099				0.950	
Satd. Flow (perm)	184	3539	3532	0	1770	1583
Right Turn on Red		Yes			Yes	Yes
Satd. Flow (RTOR)		2			4	
Link Speed (mph)	45	45	45	30	30	30
Link Distance (ft)	101.4	635	614	14.0	14.0	14.0
Travel Time (s)	15.4	9.6	9.6	14.0	14.0	14.0
Peak Hour Factor	0.89	0.89	0.94	0.94	0.73	0.73
Adj. Flow (vph)	29	1991	1780	26	52	40
Shared Lane Traffic (%)						
Lane Group Flow (vph)	29	1991	1806	0	52	40
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Right
Median Width(ft)	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	2	2	9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Left	Right	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94	94	94	6	6	6
Detector 2 Size(ft)	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 2 Type						
Detector 2 Channel						
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm				Perm	Perm
Protected Phases	2	2	6	4	4	4
Permitted Phases	2	2	6	4	4	4
Detector Phase	2	2	6	4	4	4

Lanes, Volumes, Timings
SRF & Associates

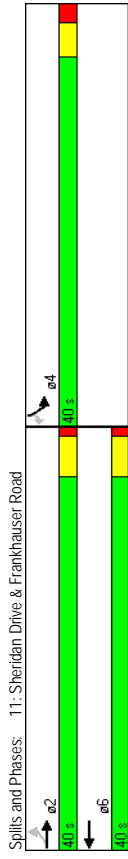
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
11: Sheridan Drive & Frankhauser Road

4/24/2014



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	1.0	1.0
Minimum Split (s)	40.0	40.0	40.0	40.0	31.1	31.1
Total Split (s)	40.0	40.0	40.0	40.0	40.0	40.0
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Maximum Green (s)	35.2	35.2	35.2	35.2	34.9	34.9
Yellow Time (s)	3.9	3.9	3.9	3.9	3.2	3.2
All-Red Time (s)	0.9	0.9	0.9	0.9	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.8	4.8	4.8	4.8	5.1	5.1
LeadLag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0	15.0	15.0	19.0	19.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effct Green (s)	65.3	65.3	65.3	65.3	7.8	7.8
Actuated g/C Ratio	0.82	0.82	0.82	0.82	0.10	0.10
v/c Ratio	0.19	0.69	0.63	0.30	0.25	0.25
Control Delay	6.3	6.0	5.1	37.3	34.0	34.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.3	6.0	5.1	37.3	34.0	34.0
LOS	A	A	A	D	D	C
Approach Delay	6.0	5.1	35.8			
Approach LOS	A	A	D			
Intersection Summary						
Area Type:	Other					
Cycle Length:	80					
Actuated Cycle Length:	80					
Offset:	76 (95%), Referenced to phase 2:EBTL and 6:WBT, Start of Green					
Natural Cycle:	90					
Control Type:	Actuated-Coordinator					
Maximum v/c Ratio:	0.69					
Intersection Signal Delay:	6.3					
Intersection Capacity Utilization:	60.6%					
Analysis Period (min):	15					



Lanes, Volumes, Timings
SRF & Associates

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
 12: Sheridan Drive & I-290 NB

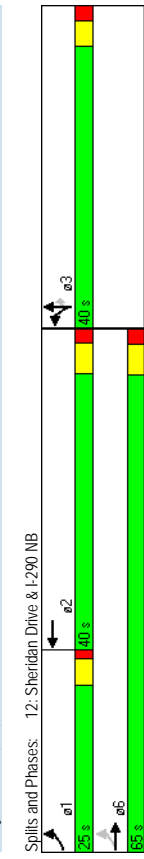
4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	249	1557	0	0	1120	538	269	0	277	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	0	0	230	0	0	0	0	0	0
Storage Lanes	1	0	0	0	1	0	0	0	0	0	0
Taper Length (ft)	105	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.95	0.91	0.95	0.95	1.00	1.00
Flt Protected	0.950				0.951			0.916	0.850		
Satd. Flow (prot)	1770	5085	0	0	4836	0	1681	1519	1504	0	0
Flt Permitted	0.072				0.950		0.978				
Satd. Flow (perm)	134	5085	0	0	4836	0	1681	1519	1504	0	0
Right Turn on Red			Yes			Yes			Yes		Yes
Satd. Flow (RTOR)			122						20		20
Link Speed (mph)		45			45				30		30
Link Distance (ft)		197			193				830		423
Travel Time (s)		3.0			2.9				18.9		9.6
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.88	0.88	0.88	0.92	0.92
Adj. Flow (vph)	245	1656	0	0	1191	572	306	0	315	0	0
Shared Lane Traffic (%)							30%		37%		
Lane Group Flow (vph)	265	1656	0	0	1763	0	214	209	198	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Left	Right	Left	Right
Median Width (ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset (ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width (ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane											
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	2	9	15	1	2	9	15	9
Number of Detectors	1	2							1	2	1
Detector Template	Left	Thru							Left	Thru	Right
Leading Detector (ft)	20	100							20	100	20
Trailing Detector (ft)	0	0							0	0	0
Detector 1 Position (ft)	0	0							0	0	0
Detector 1 Size (ft)	20	6							20	6	20
Detector 1 Type	Ch+Ex	Ch+Ex							Ch+Ex	Ch+Ex	Ch+Ex
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0							0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0							0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0							0.0	0.0	0.0
Detector 2 Position (ft)	94								94		
Detector 2 Size (ft)	6								6		
Detector 2 Type	Ch+Ex								Ch+Ex		
Detector 2 Channel											
Detector 2 Extend (s)	0.0								0.0		
Turn Type	pn+pt						custom				Perm
Protected Phases	1	6					3		3		3
Permitted Phases	6						3		3		3
Detector Phase	1	6					3		3		3

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
 12: Sheridan Drive & I-290 NB

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	1.0	4.0			4.0		4.0	4.0	4.0		4.0
Minimum Split (s)	6.2	33.9			27.8		29.0	29.0	29.0		29.0
Total Split (s)	25.0	65.0	0.0	0.0	40.0	0.0	40.0	40.0	40.0	0.0	0.0
Total Split (%)	23.8%	61.9%	0.0%	0.0%	38.1%	0.0%	38.1%	38.1%	38.1%	0.0%	0.0%
Maximum Green (s)	20.7	59.1			34.2		34.8	34.8	34.8		34.8
Yellow Time (s)	3.2	3.9			3.9		3.2	3.2	3.2		3.2
All-Red Time (s)	1.1	2.0			1.9		2.0	2.0	2.0		2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.3	5.9	4.0	4.0	5.8	4.0	5.2	5.2	5.2	4.0	4.0
Lead/Lag	Lead				Lag						
Lead-Lag Optimize?	Yes				Yes						
Vehicle Extension (s)	2.0	3.0			3.0		2.0	2.0	2.0		2.0
Recall Mode	None	C-Max			C-Max		None	None	None		None
Walk Time (s)	7.0				7.0						
Flash Dont Walk (s)	21.0				15.0						
Pedestrian Calls (#/hr)	0				0						
Act Effct Green (s)	76.8	75.2			57.4		18.7	18.7	18.7		18.7
Actuated g/C Ratio	0.73	0.72			0.55		0.18	0.18	0.18		0.18
v/c Ratio	0.85	0.45			0.65		0.71	0.73	0.69		0.69
Control Delay	48.7	7.4			19.2		53.1	50.6	48.3		48.3
Queue Delay	0.0	0.0			0.0		0.0	0.0	0.0		0.0
Total Delay	48.7	7.4			19.2		53.1	50.6	48.3		48.3
LOS	D	A			B		D	D	D		D
Approach Delay		13.1			19.2						50.7
Approach LOS		B			B						D



Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
13: Sheridan Drive & Harlem Road

4/24/2014

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔↔	↔↔	↔↔	↔↔	↔↔
Volume (vph)	908	315	521	868	285	898
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	215	0	140	0	0
Storage Lanes	1	1	2	2	2	2
Taper Length (ft)	230	100	100	100	25	25
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	0.88
Flt Protected	0.850		0.950		0.850	
Satd. Flow (prot)	3539	1583	3433	3539	3433	2787
Flt Permitted	0.950		0.950		0.950	
Satd. Flow (perm)	3539	1583	3433	3539	3433	2787
Right Turn on Red	No					Yes
Satd. Flow (RTOR)	45		45		35	107
Link Speed (mph)	314		413		338	
Link Distance (ft)	4.8		6.3		6.6	
Travel Time (s)	0.85	0.85	0.92	0.92	0.90	0.90
Peak Hour Factor	1068	371	566	943	317	998
Adj. Flow (vph)	1068	371	566	943	317	998
Lane Group Flow (vph)	No	No	No	No	No	No
Enter Blocked Intersection	Left	Right	Left	Left	Right	Right
Lane Alignment	12	24	24	24	24	24
Median Width(ft)	0	0	0	0	0	0
Link Offset(ft)	16		16		16	
Crosswalk Width(ft)	1.00	1.00	1.00	1.00	1.00	1.00
Two way Left Turn Lane	9	15	2	1	15	9
Headway Factor	2	1	1	2	1	1
Turning Speed (mph)	Thru	Right	Left	Thru	Left	Right
Number of Detectors	100	20	20	100	20	20
Detector Template	0	0	0	0	0	0
Leading Detector (ft)	6	20	20	6	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 1 Size(ft)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Type	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Channel	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94		94		94	
Detector 2 Size(ft)	6		6		6	
Detector 2 Type	Ch+Ex		Ch+Ex		Ch+Ex	
Detector 2 Channel	0.0		0.0		0.0	
Detector 2 Extend (s)	2	3	1	6	3	1
Turn Type	pm+ov	Prot			pm+ov	
Protected Phases	2	3	1	6	3	1
Permitted Phases	2	3	1	6	3	1
Detector Phase	2	3	1	6	3	1

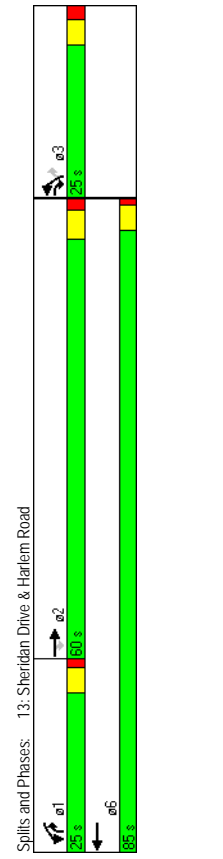
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
13: Sheridan Drive & Harlem Road

4/24/2014

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Switch Phase	↔	↔	↔	↔	↔	↔
Minimum Initial (s)	1.0	1.0	1.0	4.0	1.0	1.0
Minimum Split (s)	30.5	6.2	5.3	32.3	6.2	5.3
Total Split (s)	60.0	25.0	25.0	85.0	25.0	25.0
Total Split (%)	54.5%	22.7%	22.7%	77.3%	22.7%	22.7%
Maximum Green (s)	54.5	19.8	20.7	80.7	19.8	20.7
Yellow Time (s)	3.9	3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.6	2.0	1.1	1.1	2.0	1.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.2	4.3	4.3	5.2	4.3
Lead/Lag	Lag	Lead	Lead	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	C-Max	None	None	None	None	None
Walk Time (s)	7.0		7.0		7.0	
Flash Dont Walk (s)	18.0		21.0		21.0	
Pedestrian Calls (#/hr)	0		0		0	
Act Effct Green (s)	56.9	76.9	23.6	86.0	14.5	43.3
Actuated g/C Ratio	0.52	0.70	0.21	0.78	0.13	0.39
v/c Ratio	0.58	0.34	0.77	0.34	0.70	0.86
Control Delay	20.5	7.5	48.7	4.2	54.1	35.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.5	7.5	48.7	4.2	54.1	35.5
LOS	C	A	D	A	D	D
Approach Delay	17.1		20.9		40.0	
Approach LOS	B		C		D	



Lanes, Volumes, Timings
SRF & Associates

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
14: I-290 SB & Harlem Road

4/24/2014

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (vph)	298	744	478	21	413	391
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	0	0	330	0
Storage Lanes	1	1	0	0	1	0
Taper Length (ft)	25	25	25	25	75	25
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Flt	0.850	0.994				
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	3518	0	1770	3539
Flt Permitted	0.950				0.215	
Satd. Flow (perm)	1770	1583	3518	0	400	3539
Right Turn on Red	Yes	Yes	Yes	Yes		
Satd. Flow (RTOR)	146	4				
Link Speed (mph)	30	35				35
Link Distance (ft)	333	250				456
Travel Time (s)	7.6	4.9				8.9
Peak Hour Factor	0.81	0.81	0.87	0.87	0.88	0.88
Adj. Flow (vph)	368	919	549	24	469	444
Shared Lane Traffic (%)						
Lane Group Flow (vph)	368	919	573	0	469	444
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width (ft)	12	12			12	12
Link Offset (ft)	0	0			0	0
Crosswalk Width (ft)	16	16			16	16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru	Left	Thru	
Leading Detector (ft)	20	20	100	20	100	
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position (ft)	0	0	0	0	0	0
Detector 1 Size (ft)	20	20	6	20	6	6
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position (ft)			94			94
Detector 2 Size (ft)			6			6
Detector 2 Type			CI+EX			CI+EX
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type		pm+ov			pm+pl	
Protected Phases	3	1	2	1	1	6
Permitted Phases	3	1	2	1	1	6

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
14: I-290 SB & Harlem Road

4/24/2014

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	9.2	30.6	9.2	21.0	21.0
Total Split (s)	40.0	35.0	50.0	0.0	35.0	85.0
Total Split (%)	32.0%	28.0%	40.0%	0.0%	28.0%	68.0%
Maximum Green (s)	35.2	30.7	45.0	30.7	80.0	80.0
Yellow Time (s)	3.2	3.2	3.6	3.2	3.6	3.6
All-Red Time (s)	1.6	1.1	1.4	1.1	1.4	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.8	4.3	5.0	4.0	4.3	5.0
Lead/Lag		Lead	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Min	None	None	None
Walk Time (s)			10.0			
Flash Dont Walk (s)			15.0			
Pedestrian Calls (#/hr)			0			
Act Effct Green (s)	23.7	57.9	20.8	55.2	54.5	54.5
Actuated g/C Ratio	0.27	0.66	0.24	0.63	0.62	0.62
v/c Ratio	0.77	0.84	0.69	0.67	0.20	0.20
Control Delay	42.7	19.6	36.2	19.1	8.4	8.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.7	19.6	36.2	19.1	8.4	8.4
LOS	D	B	D	B	A	A
Approach Delay	26.2	36.2			13.9	
Approach LOS	C	D			B	

Intersection Summary

Area Type: Other

Cycle Length: 125

Actuated Cycle Length: 88.3

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.84

Intersection Signal Delay: 24.2

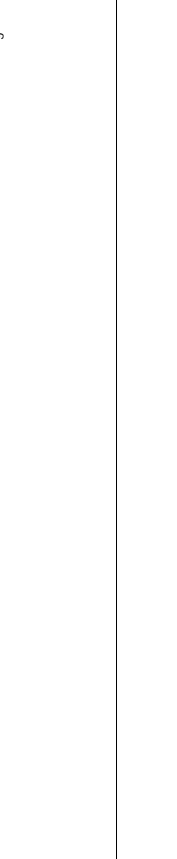
Intersection Capacity Utilization 67.7%

Analysis Period (min) 15

Intersection LOS: C

ICU Level of Service C

Splits and Phases: 14: I-290 SB & Harlem Road



Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
15: Maple Road & Proposed North Driveway

4/24/2014

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔	↔↔	↔↔	↔	↔
Volume (veh/h)	977	61	113	1007	66	107
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	225	0	150	0	150
Storage Lanes	0	1	1	1	1	1
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Fit	0.991		0.950		0.950	0.850
Flt Protected		0	1770	3539	1770	1583
Satd. Flow (prot)	3507		0.950		0.950	
Flt Permitted		3507	0	1770	3539	1770
Satd. Flow (perm)	45		45	30		
Link Speed (mph)	1002		926	372		
Link Distance (ft)	15.2		14.0	8.5		
Travel Time (s)	1062		66	123	1095	72
Adj. Flow (vph)	1128		0	123	1095	72
Shared Lane Traffic (%)						
Lane Group Flow (vph)	No	No	No	No	No	No
Enter Blocked Intersection	Left	Right	Left	Left	Left	Right
Lane Alignment	12	12	12	12	12	12
Median Width(ft)	0	0	0	0	0	0
Link Offset(ft)	16		16	16		16
Crosswalk Width(ft)	Yes		Yes			Yes
Two way Left Turn Lane	1.00	1.00	1.00	1.00	1.00	1.00
Headway Factor	9	15	15	15	15	9
Turning Speed (mph)	Free	Free	Free	Free	Free	Stop
Sign Control	Intersection Summary					
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	48.9%					
Analysis Period (min)	15					
	ICU Level of Service: A					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
15: Maple Road & Proposed North Driveway

4/24/2014

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔	↔↔	↔↔	↔	↔
Volume (veh/h)	977	61	113	1007	66	107
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1062	66	123	1095	72	116
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						6
Right turn flare (veh)						
Median type			TW/TL			
Median storage (veh)	2			2		
Upstream signal (ft)						
pX, platoon unblocked			1128		1888	564
vC, conflicting volume				1095		
vC1, stage 1 conf vol				793		
vC2, stage 2 conf vol			1128		1888	564
vCu, unblocked vol			4.1		6.8	6.9
IC, 2 stage (s)					5.8	
IF (s)			2.2		3.5	3.3
p0 queue free %			80		66	75
cM capacity (veh/h)			615		212	469
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	708	420	123	547	547	188
Volume Left	0	0	123	0	0	72
Volume Right	0	66	0	0	0	116
cSH	1700	1700	615	1700	1700	556
Volume to Capacity	0.42	0.25	0.20	0.32	0.32	0.34
Queue Length 95th (ft)	0	0	18	0	0	37
Control Delay (s)	0.0	0.0	12.3	0.0	0.0	21.0
Lane LOS			B			C
Approach Delay (s)	0.0		1.2			21.0
Approach LOS						C
Intersection Summary						
Average Delay	2.2					
Intersection Capacity Utilization	48.9%					
Analysis Period (min)	15					
	ICU Level of Service: A					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
16: Sheridan Drive & Proposed Ltd Access Driveway

4/24/2014



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (vph)	27	1683	1611	47	0	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200	0	0	0	0	0
Storage Lanes	1	0	0	0	1	1
Taper Length (ft)	25	0.95	0.95	0.95	1.00	1.00
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Flt Protected	0.950					0.865
Satd. Flow (prot)	1770	3539	3525	0	0	1611
Flt Permitted	0.950					
Satd. Flow (perm)	1770	3539	3525	0	0	1611
Link Speed (mph)	45	45	45	30		
Link Distance (ft)	699	969	969	220		
Travel Time (s)	10.6	14.7	14.7	5.0		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	29	1829	1751	51	0	25
Shared Lane Traffic (%)						
Lane Group Flow (vph)	29	1829	1802	0	0	25
Enter Blocked Intersection	No	Yes	No	No	No	No
Lane Alignment	Left	Left	Right	Right	Left	Right
Median Width(ft)	12	12	12	0		
Link Offset(ft)	0	0	0	0		
Crosswalk Width(ft)	16	16	16	16		
Two way Left Turn Lane	Yes	Yes	Yes			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	Free	Free	9	15	9
Sign Control	Free	Free	Free	Stop	Stop	Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	56.0%					
Analysis Period (min)	15					
ICU Level of Service:	B					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
16: Sheridan Drive & Proposed Ltd Access Driveway

4/24/2014



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (veh/h)	27	1683	1611	47	0	23
Sign Control	Free	Free	Free	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	29	1829	1751	51	0	25
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL TWLTL					
Median storage (veh)	2 2					
Upstream signal (ft)	969					
pX, platoon unblocked	0.69					
vC, conflicting volume	1802					
vC1, stage 1 conf vol	1777					
vC2, stage 2 conf vol	973					
vCu, unblocked vol	2640					
IC, single (s)	4.1					
IC, 2 stage (s)	5.8					
IF (s)	2.2					
p0 queue free %	92					
cM capacity (veh/h)	376					
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	29	915	915	1167	635	25
Volume Left	29	0	0	0	0	0
Volume Right	0	0	0	0	51	25
cSH	376	1700	1700	1700	1700	752
Volume to Capacity	0.08	0.54	0.54	0.69	0.37	0.03
Queue Length 95th (ft)	6	0	0	0	0	3
Control Delay (s)	15.4	0.0	0.0	0.0	0.0	10.0
Lane LOS	C	A	A	A	A	A
Approach Delay (s)	0.2					
Approach LOS	A					
Intersection Summary						
Average Delay	0.2					
Intersection Capacity Utilization	56.0%					
ICU Level of Service	B					
Analysis Period (min)	15					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
 1: Maple Road & Millersport Hwy SB
 4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (vph)	29	989	909	229	60	174
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	0	0	0	0	0
Storage Lanes	1	1	1	1	1	1
Taper Length (ft)	35	100	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00
Flt Protected	0.950			0.850	0.950	
Satd. Flow (prot)	1770	3539	3539	1583	1770	1583
Flt Permitted	0.268			0.950		
Satd. Flow (perm)	499	3539	3539	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)		45	45		30	78
Link Speed (mph)		555	654		281	
Link Distance (ft)		8.4	9.9		6.4	
Travel Time (s)		0.90	0.92	0.92	0.81	0.81
Peak Hour Factor		32	1099	988	249	74
Adj. Flow (vph)		32	1099	988	249	74
Shared Lane Traffic (%)						
Lane Group Flow (vph)	No	No	No	No	No	No
Enter Blocked Intersection	Left	Left	Right	Left	Right	Right
Lane Alignment	Left	Left	Right	Left	Right	Right
Median Width(ft)	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16
Two way Left Turn Lane		Yes				
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	15	15	15	15	15
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94	94	94			
Detector 2 Size(ft)	6	6	6			
Detector 2 Type	CI+EX	CI+EX	CI+EX			
Detector 2 Channel						
Detector 2 Extend (s)	0.0	0.0	0.0			
Turn Type	Perm			pm+ov		Perm
Protected Phases	2	6	6	4	4	
Permitted Phases	2	2	6	6	4	4
Detector Phase	2	2	6	4	4	4

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
 1: Maple Road & Millersport Hwy SB
 4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	1.0	1.0	1.0
Minimum Split (s)	9.1	9.1	9.1	6.2	6.2	6.2
Total Split (s)	40.0	40.0	40.0	30.0	30.0	30.0
Total Split (%)	57.1%	57.1%	57.1%	42.9%	42.9%	42.9%
Maximum Green (s)	34.9	34.9	34.9	25.4	25.4	25.4
Yellow Time (s)	3.9	3.9	3.9	3.2	3.2	3.2
All-Red Time (s)	1.2	1.2	1.2	1.4	1.4	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	4.6	4.6	4.6
LeadLag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Min	C-Min	C-Min	None	None	None
Act Effct Green (s)	48.4	48.4	48.4	70.0	70.0	70.0
Actuated g/C Ratio	0.69	0.69	0.69	1.00	1.00	1.00
v/c Ratio	0.09	0.45	0.40	0.16	0.25	0.64
Control Delay	5.9	6.3	8.4	0.2	25.0	25.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.9	6.3	8.4	0.2	25.0	25.1
LOS	A	A	A	A	C	C
Approach Delay		6.3	6.8			25.0
Approach LOS		A	A			C

Intersection Summary

Area Type:	Other
Cycle Length:	70
Actuated Cycle Length:	70
Offset:	5 (7%), Referenced to phase 2:EBTL and 6:WBT. Start of Green
Natural Cycle:	40
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.64
Intersection Signal Delay:	8.6
Intersection LOS:	A
Intersection Capacity Utilization:	44.0%
Analysis Period (min):	15



Splits and Phases: 1: Maple Road & Millersport Hwy SB

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
 2: Maple Road & Millersport Hwy NB

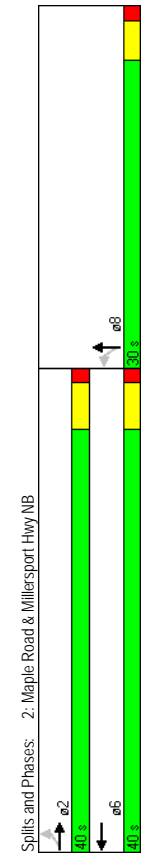
4/24/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	97	952	0	0	1046	31	91	0	466	0	0
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	100	0	0	0	0	0	0	0	0	0	0
Storage Length (ft)	1	0	0	0	0	1	0	0	0	0	0
Storage Lanes	50	25	25	25	25	25	25	25	25	25	25
Taper Length (ft)	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor				0.96%			0.850				
Flt Protected	0.950					0.950					
Satd. Flow (prot)	1770	3539	0	0	3525	0	1770	1583	0	0	0
Flt Permitted	0.136					0.950					
Satd. Flow (perm)	253	3539	0	0	3525	0	1770	1583	0	0	0
Right Turn on Red			Yes			Yes			Yes		Yes
Satd. Flow (RTOR)		45		6			66				30
Link Speed (mph)		654		1770		263		319		263	
Link Distance (ft)		9.9		26.8		7.3		6.0		6.0	
Travel Time (s)		0.91		0.87		0.84		0.84		0.84	
Peak Hour Factor		107		1046		0		1202		36	
Adj. Flow (vph)		107		1046		0		108		0	
Shared Lane Traffic (%)		107		1046		0		108		555	
Lane Group Flow (vph)	No	No	No	No	No	No	No	No	No	No	No
Enter Blocked Intersection	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Lane Alignment	12	12	12	12	12	12	12	12	12	12	12
Median Width(ft)	0	0	0	0	0	0	0	0	0	0	0
Link Offset(ft)	16	16	16	16	16	16	16	16	16	16	16
Crosswalk Width(ft)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Two way Left Turn Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Headway Factor	15	9	15	9	15	9	15	9	15	9	15
Turning Speed (mph)	1	2	1	2	1	2	1	2	1	2	1
Number of Detectors	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left	Left	Right
Detector Template	20	100	100	100	20	100	20	100	20	100	100
Leading Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	20	6	6	6	6	6	20	6	6	6	6
Detector 1 Size(ft)	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Type	Detector 1 Channel	Detector 1 Extend (s)	Detector 1 Queue (s)	Detector 1 Delay (s)	Detector 2 Position(ft)	Detector 2 Size(ft)	Detector 2 Type	Detector 2 Channel	Detector 2 Extend (s)	Turn Type	Protected Phases
Detector 1 Channel	0.0	0.0	0.0	0.0	94	6	CI+EX	Detector 2 Channel	0.0	Perm	2
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	94	6	CI+EX	Detector 2 Channel	0.0	Perm	2
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	94	6	CI+EX	Detector 2 Channel	0.0	Perm	2
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	94	6	CI+EX	Detector 2 Channel	0.0	Perm	2
Detector 2 Position(ft)	94	6	6	6	94	6	CI+EX	Detector 2 Channel	0.0	Perm	2
Detector 2 Size(ft)	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	Detector 2 Channel	0.0	Perm	2
Detector 2 Type	Detector 2 Channel	Detector 2 Extend (s)	Turn Type	Protected Phases	Permitted Phases	Detector Phase		Detector 2 Channel	0.0	Perm	2
Detector 2 Channel	0.0	0.0	0.0	0.0	94	6	CI+EX	Detector 2 Channel	0.0	Perm	2
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	94	6	CI+EX	Detector 2 Channel	0.0	Perm	2
Turn Type	Perm	Perm	Perm	Perm	94	6	CI+EX	Detector 2 Channel	0.0	Perm	2
Protected Phases	2	2	2	2	94	6	CI+EX	Detector 2 Channel	0.0	Perm	2
Permitted Phases	2	2	2	2	94	6	CI+EX	Detector 2 Channel	0.0	Perm	2
Detector Phase	2	2	2	2	94	6	CI+EX	Detector 2 Channel	0.0	Perm	2

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
 2: Maple Road & Millersport Hwy NB

4/24/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase	1.0	1.0	4.0	4.0	4.0	1.0	1.0	1.0	1.0	1.0	1.0
Minimum Initial (s)	6.1	6.1	9.1	9.1	9.1	6.2	6.2	6.2	6.2	6.2	6.2
Minimum Split (s)	40.0	40.0	0.0	0.0	40.0	0.0	30.0	30.0	0.0	0.0	0.0
Total Split (s)	57.1%	57.1%	0.0%	0.0%	57.1%	0.0%	42.9%	42.9%	0.0%	0.0%	0.0%
Total Split (%)	34.9	34.9	34.9	34.9	34.9	25.4	25.4	25.4	25.4	25.4	25.4
Maximum Green (s)	3.9	3.9	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
Yellow Time (s)	1.2	1.2	1.2	1.2	1.2	1.4	1.4	1.4	1.4	1.4	1.4
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	5.1	5.1	4.0	4.0	5.1	4.0	4.6	4.6	4.0	4.0	4.0
Total Lost Time (s)											
Lead-Lag											
Lead-Lag Optimize?											
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
Recall Mode	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min
Act Effct Green (s)	35.9	35.9	35.9	35.9	35.9	24.4	24.4	24.4	24.4	24.4	24.4
Actuated g/C Ratio	0.51	0.51	0.51	0.51	0.51	0.35	0.35	0.35	0.35	0.35	0.35
v/c Ratio	0.83	0.58	0.68	0.68	0.68	0.17	0.93	0.93	0.17	0.93	0.93
Control Delay	62.2	11.2	15.5	15.5	15.5	16.2	44.9	44.9	16.2	44.9	44.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.2	11.2	15.5	15.5	15.5	16.2	44.9	44.9	16.2	44.9	44.9
LOS	E	B	B	B	B	B	B	B	B	B	D
Approach Delay	15.9	15.9	15.5	15.5	15.5	40.2	40.2	40.2	15.5	15.5	15.5
Approach LOS	B	B	B	B	B	D	D	D	B	B	D
Intersection Summary											
Area Type:	Other										
Cycle Length:	70										
Actuated Cycle Length:	70										
Offset:	5 (7%), Referenced to phase 2:EBTL and 6:WBT, Start of Green										
Natural Cycle:	50										
Control Type:	Actuated-Coordinated										
Maximum v/c Ratio:	0.93										
Intersection Signal Delay:	21.0										
Intersection LOS:	C										
Intersection Capacity Utilization:	76.5%										
Analysis Period (min):	15										



Splits and Phases: 2: Maple Road & Millersport Hwy NB

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
3: Maple Road & Maplemere Road

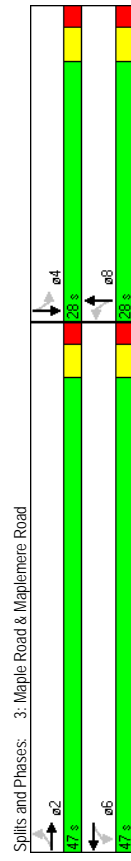
4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	36	1280	35	21	967	62	22	0	12	77	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	70	0	0	0	0	0	0	0	0
Storage Lanes	1	0	1	0	0	0	0	0	0	0	0
Taper Length (ft)	50	25	50	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Flt	0.996	0.950	0.991	0.952	0.964	0.968	0.969	0.968	0.968	0.964	0.964
Satd. Flow (prot)	1770	3525	0	1770	3507	0	1718	0	1718	0	1738
Flt Permitted	0.205	0.147	0.785	0.785	0.785	0.785	0.785	0.785	0.785	0.785	0.767
Right Turn on Red	382	3525	0	274	3507	0	1392	0	1377	0	1377
Satd. Flow (RTOR)	6	14	Yes	14	Yes	19	Yes	19	Yes	25	Yes
Link Speed (mph)	45	45	30	30	30	30	30	30	30	30	30
Link Distance (ft)	26.8	1106	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8
Travel Time (s)	26.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8
Peak Hour Factor	0.94	0.94	0.94	0.87	0.87	0.87	0.62	0.62	0.62	0.81	0.81
Adj. Flow (vph)	38	1362	37	24	1111	71	35	0	19	95	10
Shared Lane Traffic (%)	38	1399	0	24	1182	0	54	0	54	0	143
Lane Group Flow (vph)	No	No	No	No	No	No	No	No	No	No	No
Enter Blocked Intersection	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Median Width (ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset (ft)	16	16	16	16	16	16	16	16	16	16	16
Crosswalk Width (ft)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	15	9	15	15	9	15	15	9
Number of Detectors	1	2	1	2	1	2	1	2	1	2	1
Detector Template	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left
Leading Detector (ft)	20	100	20	100	20	100	20	100	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size (ft)	20	6	20	6	20	6	20	6	20	6	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position (ft)	94	94	94	94	94	94	94	94	94	94	94
Detector 2 Size (ft)	6	6	6	6	6	6	6	6	6	6	6
Detector 2 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 2 Channel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Extend (s)	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm
Turn Type	2	2	6	6	6	6	8	8	8	4	4
Permitted Phases	2	2	6	6	6	6	8	8	8	4	4
Detector Phase	2	2	6	6	6	6	8	8	8	4	4

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
3: Maple Road & Maplemere Road

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	9.0	9.0	9.0	9.0	9.0	27.0	27.0	27.0	27.0	27.0
Total Split (s)	47.0	47.0	0.0	47.0	47.0	0.0	28.0	28.0	0.0	28.0	28.0
Total Split (%)	62.7%	62.7%	0.0%	62.7%	62.7%	0.0%	37.3%	37.3%	0.0%	37.3%	37.3%
Maximum Green (s)	42.0	42.0	42.0	42.0	42.0	42.0	23.0	23.0	0.0	23.0	23.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Lead-Lag Optimize?											
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	None	None	None	None	None
Recall Mode	Min	Min	Min	Min	Min	Min	None	None	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	15.0	15.0	15.0	15.0	15.0
Flash Dont Walk (s)	7.0	7.0	7.0	7.0	7.0	7.0	15.0	15.0	15.0	15.0	15.0
Pedestrian Calls (#/hr)							0	0	0	0	0
Act Effct Green (s)	34.6	34.6	34.6	34.6	34.6	34.6	9.7	9.7	0	9.7	10.3
Actuated g/C Ratio	0.68	0.68	0.68	0.68	0.68	0.68	0.19	0.19	0	0.20	0.20
v/c Ratio	0.15	0.58	0.13	0.49	0.13	0.49	0.19	0.19	0	0.48	0.48
Control Delay	6.9	7.7	7.3	6.7	7.3	6.7	15.6	15.6	0.0	22.7	22.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.9	7.7	7.3	6.7	7.3	6.7	15.6	15.6	0.0	22.7	22.7
LOS	A	A	A	A	A	A	B	B	B	C	C
Approach Delay	7.7	7.7	7.7	6.7	6.7	6.7	15.6	15.6	15.6	22.7	22.7
Approach LOS	A	A	A	A	A	A	B	B	B	C	C
Intersection Summary	Other										
Area Type:	Other										
Cycle Length:	75										
Actuated Cycle Length:	50.7										
Natural Cycle:	60										
Control Type:	Actuated-Uncoordinated										
Maximum v/c Ratio:	0.58										
Intersection Signal Delay:	8.2										
Intersection Capacity Utilization:	52.6%										
Analysis Period (min):	15										



Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
4: Maple Road & Donna Lea Blvd

4/24/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Volume (vph)	1340	29	23	1038	12	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	50	0	0	0	0
Storage Lanes	0	1	0	1	0	0
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Flt Protected	0.997		0.950	0.982	0.982	
Satd. Flow (prot)	3529	0	1770	3539	1672	0
Flt Permitted	0.950		0.950	0.982	0.982	
Satd. Flow (perm)	3529	0	1770	3539	1672	0
Link Speed (mph)	45		45	30	30	
Link Distance (ft)	1106		1000	355	355	
Travel Time (s)	16.8		15.2	8.1	8.1	
Adj. Flow (vph)	1836	40	30	1348	15	26
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1876	0	30	1348	41	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12		12	12	12	
Link Offset(ft)	0		0	0	0	
Crosswalk Width(ft)	16		16	16	16	
Two way Left Turn Lane	Yes		Yes	Yes	Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15	15	15	15	9
Sign Control	Free	Free	Free	Free	Stop	Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	48.0%					
Analysis Period (min)	15					
ICU Level of Service:	A					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
4: Maple Road & Donna Lea Blvd

4/24/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	Free	Free	Free	Free	Stop	Stop
Volume (veh/h)	1340	29	23	1038	12	21
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.73	0.73	0.77	0.77	0.82	0.82
Hourly flow rate (vph)	1836	40	30	1348	15	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLT	TWLT	TWLT	TWLT	TWLT	TWLT
Median storage (veh)	2				2	
Upstream signal (ft)	1106					
pX, platoon unblocked		0.75	0.75	0.75	0.75	0.75
vC, conflicting volume		1875	1875	2589	1855	938
vC1, stage 1 conf vol						
vC2, stage 2 conf vol		1499	1499	2452	734	247
vCu, unblocked vol		4.1	4.1	6.8	6.9	6.9
IC, single (s)					5.8	
IC, 2 stage (s)						
IF (s)		2.2	2.2	3.5	3.3	3.3
p0 queue free %		91	91	88	95	95
cM capacity (veh/h)		332	332	122	564	564
Direction, Lane #						
	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	1224	652	30	674	674	40
Volume Left	0	0	30	0	0	15
Volume Right	0	40	0	0	0	26
cSH	1700	1700	332	1700	1700	244
Volume to Capacity	0.72	0.38	0.09	0.40	0.40	0.17
Queue Length 95th (ft)	0	0	7	0	0	15
Control Delay (s)	0.0	0.0	16.9	0.0	0.0	22.7
Lane LOS			C			C
Approach Delay (s)	0.0	0.4	0.4			22.7
Approach LOS						C
Intersection Summary						
Average Delay	0.4					
Intersection Capacity Utilization	48.0%					
ICU Level of Service	A					
Analysis Period (min)	15					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
5: Maple Road & Audubon Golf Club

4/24/2014



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	0	1437	14	8	1095	2	10	0	0	6	0
Volume (vph)	0	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vpph)	100	100	0	50	0	0	0	0	0	0	0
Storage Length (ft)	1	0	1	0	0	0	0	0	0	0	0
Storage Lanes	25	25	25	25	25	25	25	25	25	25	25
Taper Length (ft)	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.999						0.948				
Flt Protected		0.950					0.970				
Flt Flow (prot)	1863	3536	0	1770	3539	0	1713	0	0	1863	0
Flt Permitted		0.950					0.970				
Satd. Flow (perm)	1863	3536	0	1770	3539	0	1713	0	0	1863	0
Link Speed (mph)	45	45	0	45	45	0	30	0	0	30	0
Link Distance (ft)	446	446	0	556	556	0	469	0	0	469	0
Travel Time (s)	6.8	6.8	0	8.4	8.4	0	10.7	0	0	10.7	0
Peak Hour Factor	0.92	0.92	0.92	0.93	0.93	0.93	0.61	0.61	0.61	0.92	0.92
Adj. Flow (vph)	0	1562	15	9	1177	2	16	0	10	0	0
Shared Lane Traffic (%)											
Lane Group Flow (vph)	0	1577	0	9	1179	0	0	26	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Right
Median Width (ft)	12	12	0	12	12	0	0	0	0	0	0
Link Offset (ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width (ft)	16	16	0	16	16	0	16	0	0	16	0
Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	15	9	15	15	9	15	15	9	15	9
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	50.2%
Analysis Period (min)	15
ICU Level of Service:	A

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
5: Maple Road & Audubon Golf Club

4/24/2014



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	0	1437	14	8	1095	2	10	0	0	6	0
Volume (veh/h)	0	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.93	0.93	0.93	0.61	0.61	0.61	0.92	0.92
Hourly flow rate (vph)	0	1562	15	9	1177	2	16	0	10	0	0
Pedestrians											
Lane Width (ft)											
Walking Speed (ft/s)											
Percent Blockage											
Right turn flare (veh)											
Median type	TWLT	TWLT	TWLT	TWLT	TWLT	TWLT	TWLT	TWLT	TWLT	TWLT	TWLT
Median storage (veh)	2	2	0	2	2	0	2	0	2	0	2
Upstream signal (ft)											
pX, platoon unblocked											
vC, conflicting volume	1180	1577	1577	2175	2766	789	1987	2773	590	1196	1196
vC1, stage 1 cont vol											
vC2, stage 2 cont vol											
vCu, unblocked vol	1180	1577	1577	2175	2766	789	1987	2773	590	1196	1196
IC, single (s)	4.1	4.1	4.1	7.5	6.5	6.9	7.5	6.5	6.5	6.5	6.9
IC, 2 stage (s)											
IF (s)	2.2	2.2	2.2	3.5	4.0	3.3	3.5	4.0	3.3	4.0	3.3
p0 queue free %	100	98	98	85	100	97	100	100	100	100	100
cM capacity (veh/h)	588	413	413	110	136	334	164	130	451	130	451

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	0	1041	536	9	785	395	26	0
Volume Left	0	0	0	9	0	0	16	0
Volume Right	0	0	15	0	0	2	10	0
cSH	1700	1700	1700	413	1700	1700	146	1700
Volume to Capacity	0.00	0.61	0.32	0.02	0.46	0.23	0.18	0.00
Queue Length 95th (ft)	0	0	0	2	0	0	16	0
Control Delay (s)	0.0	0.0	0.0	13.9	0.0	0.0	34.9	0.0
Lane LOS	A	A	A	B	A	A	D	A
Approach Delay (s)	0.0	0.1	0.1	34.9	0.0	0.0	0.0	0.0
Approach LOS	A	A	A	D	A	A	A	A

Intersection Summary	Average Delay
Average Delay	0.4
Intersection Capacity Utilization	50.2%
Analysis Period (min)	15
ICU Level of Service	A

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
6: Maple Road & North Forest Road

4/24/2014

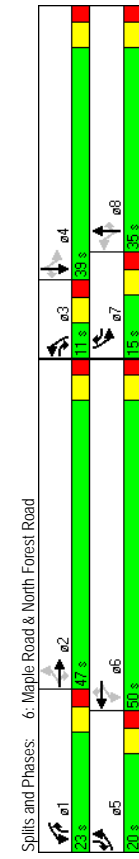
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	216	1093	145	239	817	96	96	359	208	169	390
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	415	220	315	220	315	150	125	220	250	250	250
Storage Lanes	1	1	1	1	1	1	1	1	1	1	1
Taper Length (ft)	90	115	60	25	95	25	95	25	90	90	25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.950		0.950		0.950		0.950		0.850		0.850
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1863	1583	1770	1863
Flt Permitted	0.183		0.090		0.155		0.155		0.160		0.160
Satd. Flow (perm)	341	3539	1583	168	3539	1583	289	1863	1583	298	1863
Right Turn on Red	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes	Yes	Yes
Satd. Flow (RTOR)		131					23				58
Link Speed (mph)	45		45		45		35		35		35
Link Distance (ft)	1705		820		529		608		608		11.8
Travel Time (s)	25.8		12.4		10.3		11.8		11.8		11.8
Peak Hour Factor	0.92	0.92	0.92	0.90	0.90	0.90	0.96	0.96	0.96	0.87	0.87
Adj. Flow (vph)	235	1188	158	266	908	107	100	374	217	194	448
Shared Lane Traffic (%)											
Lane Group Flow (vph)	235	1188	158	266	908	107	100	374	217	194	448
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Median Width (ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset (ft)	0		0		0		0		0		0
Crosswalk Width (ft)	16		16		16		16		16		16
Two way Left Turn Lane	Yes		Yes		Yes		Yes		Yes		Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	2	1	2	1	2	1	1	2
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru
Leading Detector (ft)	20	100	20	100	20	100	20	100	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size (ft)	20	6	20	20	6	20	20	6	20	20	6
Detector 1 Type	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position (ft)	94		94		94		94		94		94
Detector 2 Size (ft)	6		6		6		6		6		6
Detector 2 Type	Ch+Ex		Ch+Ex		Ch+Ex		Ch+Ex		Ch+Ex		Ch+Ex
Detector 2 Channel											
Detector 2 Extend (s)	0.0		0.0		0.0		0.0		0.0		0.0
Turn Type	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt
Protected Phases	5	2	3	1	6	7	3	8	1	7	4
Permitted Phases	2	2	2	6	6	6	8	8	4	4	4
Detector Phase	5	2	3	1	6	7	3	8	1	7	4

Lanes, Volumes, Timings
SRF & Associates
Synchro 7 - Report
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
6: Maple Road & North Forest Road

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	1.0	4.0	1.0	1.0	4.0	1.0	1.0	4.0	1.0	1.0	4.0
Minimum Split (s)	7.0	35.0	7.0	7.0	35.0	7.0	7.0	35.0	7.0	7.0	35.0
Total Split (s)	20.0	47.0	11.0	23.0	50.0	15.0	11.0	35.0	23.0	15.0	39.0
Total Split (%)	16.7%	39.2%	9.2%	19.2%	41.7%	12.5%	9.2%	29.2%	19.2%	12.5%	32.5%
Maximum Green (s)	14.0	41.0	5.0	17.0	44.0	9.0	5.0	29.0	17.0	9.0	33.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lead	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Walk Time (s)	7.0		7.0		7.0		7.0		7.0		7.0
Flash Dont Walk (s)	22.0		22.0		22.0		22.0		22.0		22.0
Pedestrian Calls (#/hr)	0		0		0		0		0		0
Act Effct Green (s)	53.9	41.1	52.1	60.0	44.1	59.2	31.7	26.7	48.5	39.7	30.7
Actuated G/C Ratio	0.46	0.35	0.45	0.51	0.38	0.51	0.27	0.23	0.42	0.34	0.26
v/c Ratio	0.75	0.95	0.20	0.88	0.68	0.13	0.70	0.88	0.32	0.90	0.91
Control Delay	33.4	54.4	5.9	58.5	34.1	16.8	55.4	65.9	21.6	71.0	66.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.4	54.4	5.9	58.5	34.1	16.8	55.4	65.9	21.6	71.0	66.6
LOS	C	D	A	E	C	B	E	E	C	E	B
Approach Delay	46.5		37.7		50.5		56.9		56.9		56.9
Approach LOS	D		D		D		D		D		E
Intersection Summary	Other										
Area Type:	Other										
Cycle Length:	120										
Actuated Cycle Length:	116.7										
Natural Cycle:	95										
Control Type:	Actuated-Uncoordinated										
Maximum v/c Ratio:	0.95										
Intersection Signal Delay:	46.5										
Intersection Capacity Utilization:	91.7%										
Analysis Period (min):	15										



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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
7: Sheridan Drive & Mill Street

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	17	1411	26	121	1418	53	151	53	148	34	68
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vpph)	100	0	150	0	150	0	40	0	75	0	75
Storage Length (ft)	1	0	1	0	1	0	1	0	1	0	1
Storage Lanes	65	25	60	25	60	25	25	25	25	25	25
Taper Length (ft)	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.997		0.995		0.995		0.890		0.890		0.973
Flt Protected	0.950		0.950		0.950		0.950		0.950		0.950
Satd. Flow (prot)	1770	3529	0	1770	3522	0	1770	1658	0	1770	1812
Flt Permitted	0.089		0.081		0.081		0.596		0.608		0.608
Satd. Flow (perm)	166	3529	0	151	3522	0	1110	1658	0	1133	1812
Right Turn on Red		No			Yes			No		No	Yes
Satd. Flow (RTOR)				4							8
Link Speed (mph)	45			45			30		30		30
Link Distance (ft)	2782			977			838		362		82
Travel Time (s)	42.2			14.8			19.0		8.2		8.2
Peak Hour Factor	0.84	0.84	0.84	0.92	0.92	0.83	0.83	0.83	0.83	0.77	0.77
Adj. Flow (vph)	20	1660	31	132	1541	58	182	64	178	44	88
Shared Lane Traffic (%)											
Lane Group Flow (vph)	20	1711	0	132	1599	0	182	242	0	44	107
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset(ft)	0			0			0		0		0
Crosswalk Width(ft)	16			16			16		16		16
Two way Left Turn Lane	Yes			Yes			Yes		Yes		Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9	15	9	15	9	15
Number of Detectors	1	2	1	2	1	2	1	2	1	2	1
Detector Template	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left
Leading Detector (ft)	20	100	20	100	20	100	20	100	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	6	20	6	20	6	20	6	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94	0	94	0	94	0	94	0	94	0	94
Detector 2 Size(ft)	6	6	6	6	6	6	6	6	6	6	6
Detector 2 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 2 Channel											
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm		pm+pt		pm+pt		pm+pt		Perm		Perm
Protected Phases	2	1	6	6	8	3	8	4			4
Permitted Phases	2	2	1	6	3	8	4	4			4
Detector Phase	2	2	1	6	3	8	4	4			4

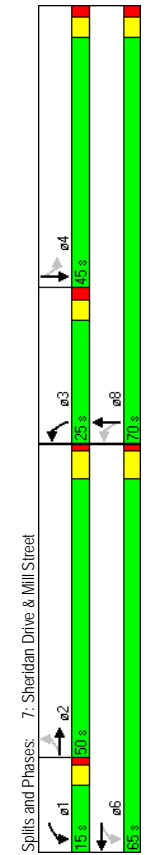
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
7: Sheridan Drive & Mill Street

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase	4.0	4.0	1.0	4.0	1.0	4.0	1.0	4.0	1.0	4.0	4.0
Minimum Initial (s)	28.3	28.3	6.2	28.3	6.2	28.3	6.2	34.2	6.2	34.2	34.2
Minimum Split (s)	50.0	50.0	0.0	15.0	65.0	0.0	25.0	70.0	0.0	45.0	45.0
Total Split (s)	37.0%	37.0%	0.0%	11.1%	48.1%	0.0%	18.5%	51.9%	0.0%	33.3%	33.3%
Total Split (%)	44.5	44.5	10.7	59.5	19.8	64.8	39.8	39.8	39.8	39.8	39.8
Maximum Green (s)	4.3	4.3	3.2	4.3	3.2	4.3	3.2	3.2	3.2	3.2	3.2
Yellow Time (s)	1.2	1.2	1.1	1.2	1.1	1.2	2.0	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	5.5	5.5	4.0	4.3	5.5	4.0	5.2	5.2	4.0	5.2	5.2
Total Lost Time (s)	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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
Recall Mode	None	None	None	None	None	None	Max	Max	Max	Max	Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0	15.0	15.0	15.0	15.0	22.0	22.0	22.0	22.0	22.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0	0	0	0
Act Effct Green (s)	45.1	45.1	60.7	59.5	64.8	64.8	64.8	64.8	64.8	39.8	39.8
Actuated G/C Ratio	0.33	0.33	0.45	0.44	0.48	0.48	0.29	0.29	0.29	0.29	0.29
v/c Ratio	0.36	1.45	0.70	1.03	0.29	0.30	0.13	0.20	0.13	0.20	0.20
Control Delay	56.4	241.9	45.9	67.5	21.8	22.7	36.4	34.1	36.4	34.1	34.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.4	241.9	45.9	67.5	21.8	22.7	36.4	34.1	36.4	34.1	34.1
LOS	E	F	D	E	C	C	D	C	D	C	C
Approach Delay	239.8	F	65.9	E	22.3	C	C	C	C	C	C
Approach LOS	F	E	E	C	C	C	C	C	C	C	C
Intersection Summary	Other										
Area Type:	Other										
Cycle Length:	135										
Actuated Cycle Length:	135										
Natural Cycle:	110										
Control Type:	Semi Act-Uncoordinated										
Maximum v/c Ratio:	1.45										
Intersection Signal Delay:	134.7										
Intersection Capacity Utilization:	78.6%										
Analysis Period (min):	15										



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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
8: Sheridan Drive & North Forest Road

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	156	1293	308	305	1220	41	304	468	82	24	496
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	405	170	260	0	180	0	180	265	180	200	200
Storage Lanes	1	1	1	0	1	0	1	1	1	1	1
Taper Length (ft)	200	25	200	25	200	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95
Flt Protected	0.950	0.850	0.950	0.950	0.950	0.950	0.950	0.950	0.850	0.950	0.850
Satd. Flow (prot)	1770	3539	1583	1770	3522	0	1770	1863	1583	1770	3539
Flt Permitted	0.073	0.070	0.070	0.184	0.184	0.184	0.184	0.173	0.173	0.173	0.173
Satd. Flow (perm)	136	3539	1583	130	3522	0	343	1863	1583	322	3539
Right Turn on Red	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Satd. Flow (RTOR)	139	139	139	2	2	2	69	69	69	69	222
Link Speed (mph)	45	45	45	45	45	45	40	40	40	35	35
Link Distance (ft)	969	969	969	2219	2219	2219	547	547	547	354	354
Travel Time (s)	14.7	14.7	14.7	33.6	33.6	33.6	9.3	9.3	9.3	6.9	6.9
Peak Hour Factor	0.94	0.94	0.94	0.93	0.93	0.93	0.89	0.89	0.89	0.95	0.95
Adj. Flow (vph)	166	1482	328	328	1312	44	342	526	92	25	522
Shared Lane Traffic (%)	166	1482	328	328	1356	0	342	526	92	25	522
Lane Group Flow (vph)	No	No	No	No	No	No	No	No	No	No	No
Enter Blocked Intersection	Left	Left	Right	Left	Right	Left	Left	Right	Left	Right	Right
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Right	Right
Median Width (ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset (ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width (ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	15	15	9	15	15	9	15	15
Number of Detectors	1	2	1	2	1	1	2	1	1	1	2
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru
Leading Detector (ft)	20	100	20	100	20	100	20	100	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size (ft)	20	6	20	20	6	20	6	20	6	20	6
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel	Detector 1 Channel	Detector 1 Channel	Detector 1 Channel	Detector 1 Channel	Detector 1 Channel	Detector 1 Channel	Detector 1 Channel	Detector 1 Channel	Detector 1 Channel	Detector 1 Channel	Detector 1 Channel
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position (ft)	94	94	94	94	94	94	94	94	94	94	94
Detector 2 Size (ft)	6	6	6	6	6	6	6	6	6	6	6
Detector 2 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 2 Channel	Detector 2 Channel	Detector 2 Channel	Detector 2 Channel	Detector 2 Channel	Detector 2 Channel	Detector 2 Channel	Detector 2 Channel	Detector 2 Channel	Detector 2 Channel	Detector 2 Channel	Detector 2 Channel
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	pm+pt	Perm	pm+pt	pm+pt	pm+pt	pm+pt	Perm	pm+pt	Perm	pm+pt	Perm
Protected Phases	1	6	6	2	2	4	7	4	4	3	8
Permitted Phases	6	6	6	2	2	4	7	4	4	8	8
Detector Phase	1	6	6	5	2	7	4	4	4	3	8

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
8: Sheridan Drive & North Forest Road

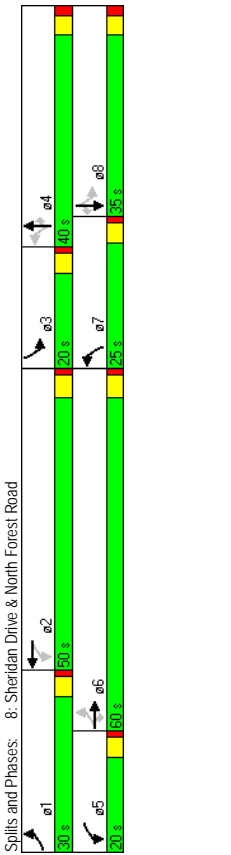
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.3	27.9	27.9	8.3	27.9	8.3	27.9	21.0	27.2	27.2	8.3
Total Split (s)	30.0	60.0	60.0	20.0	50.0	0.0	25.0	40.0	40.0	20.0	35.0
Total Split (%)	21.4%	42.9%	42.9%	14.3%	35.7%	0.0%	17.9%	28.6%	28.6%	14.3%	25.0%
Maximum Green (s)	25.7	54.9	54.9	15.7	44.9	20.7	34.9	34.9	34.9	15.7	29.9
Yellow Time (s)	3.2	3.9	3.9	3.2	3.9	3.2	3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.1	1.2	1.1	1.2	1.1	1.2	1.1	1.9	1.1	1.9	1.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.3	5.1	5.1	4.3	5.1	4.0	4.3	5.1	5.1	4.3	5.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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
Recall Mode	None	Max	None	Max	None	Max	None	None	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0	0	0	0
Act Effct Green (s)	69.2	54.9	54.9	72.7	57.1	51.4	43.8	43.8	43.8	33.2	25.6
Actuated g/C Ratio	0.51	0.40	0.40	0.54	0.42	0.38	0.32	0.32	0.24	0.19	0.19
v/c Ratio	0.72	1.03	1.03	0.45	1.27	0.91	0.98	0.88	0.17	0.17	0.46
Control Delay	46.4	73.1	73.1	19.1	48.3	78.9	61.1	61.1	12.8	29.8	61.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.4	73.1	73.1	19.1	48.3	78.9	61.1	61.1	12.8	29.8	61.3
LOS	D	E	B	F	D	E	E	E	B	C	A
Approach Delay	61.9	61.9	61.9	74.1	74.1	74.1	62.8	62.8	62.8	45.1	45.1
Approach LOS	E	E	E	E	E	E	E	E	E	D	D

Intersection Summary

Area Type:	Other
Cycle Length:	140
Actuated Cycle Length:	135.8
Natural Cycle:	125
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	1.27
Intersection Signal Delay:	63.5
Intersection Capacity Utilization:	101.6%
Analysis Period (min):	15

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
10: Sheridan Drive & Proposed South Driveway

4/24/2014



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	217	1634	13	5	1596	120	13	0	17	236	0
Ideal Flow (vpph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	350	0	75	0	0	0	0	0	0	0	0
Storage Lanes	1	0	1	0	0	0	0	0	0	0	1
Taper Length (ft)	25	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950
Satd. Flow (prot)	1770	3536	0	1770	3500	0	1681	0	1681	0	1770
Flt Permitted	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950
Satd. Flow (perm)	1770	3536	0	1770	3500	0	1681	0	1681	0	1770
Link Speed (mph)	45	45	45	45	45	45	45	45	45	45	45
Link Distance (ft)	635	635	635	635	635	635	635	635	635	635	635
Travel Time (s)	9.6	10.6	10.6	10.6	10.6	10.6	10.6	10.6	10.6	10.6	10.6
Adj. Flow (vph)	236	1878	15	5	1698	130	17	0	23	257	0
Shared Lane Traffic (%)											
Lane Group Flow (vph)	236	1893	0	5	1828	0	40	0	40	0	257
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Right	Left	Left	Left	Right	Left	Right
Median Width (ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset (ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width (ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9	15	9	15	9	15
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free

Intersection Summary	EB1	EB2	EB3	WB1	WB2	WB3	NB1	NB2	SB1	SB2	
Area Type:	Other										
Control Type:	Unsignalized										
Intersection Capacity Utilization	89.7%										
Analysis Period (min)	15										

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
10: Sheridan Drive & Proposed South Driveway

4/24/2014



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (veh/h)	217	1634	13	5	1596	120	13	0	17	236	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.87	0.87	0.94	0.94	0.92	0.75	0.92	0.75	0.92	0.92
Hourly flow rate (vph)	236	1878	15	5	1698	130	17	0	23	257	0
Pedestrians											
Lane Width (ft)											
Walking Speed (ft/s)											
Percent Blockage											
Right turn flare (veh)											
Median type											
Median storage (veh)											
Upstream signal (ft)											
pX, platoon unblocked											
vC, conflicting volume	1828	1893	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
vC1, stage 1 cont vol											
vC2, stage 2 cont vol											
vCu, unblocked vol	1828	1387	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
IC, single (s)	4.1	7.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
IC, 2 stage (s)											
IF (s)	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
p0 queue free %	29	98	98	98	98	98	98	98	98	98	98
cM capacity (veh/h)	330	336	336	336	336	336	336	336	336	336	336

Direction, Lane #	EB1	EB2	EB3	WB1	WB2	WB3	NB1	NB2	SB1	SB2
Volume Total	236	1252	641	5	1132	696	40	257	320	320
Volume Left	236	0	0	5	0	0	17	257	0	0
cSH	330	1700	1700	336	1700	1700	0	49	275	275
Volume to Capacity	0.71	0.74	0.38	0.02	0.67	0.41	Err	5.21	1.16	1.16
Queue Length 95th (ft)	130	0	0	1	0	0	Err	Err	351	351
Control Delay (s)	390	0.0	0.0	15.9	0.0	0.0	Err	Err	144.2	144.2
Lane LOS	E	C	C	F	F	F	F	F	F	F
Approach Delay (s)	4.3	0.0	0.0	Err	4532.4	0.0	Err	4532.4	0.0	0.0
Approach LOS	F	F	F	F	F	F	F	F	F	F

Intersection Summary	EB1	EB2	EB3	WB1	WB2	WB3	NB1	NB2	SB1	SB2	
Average Delay	Err										
Intersection Capacity Utilization	89.7%										
Analysis Period (min)	15										
ICU Level of Service	E										

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
11: Sheridan Drive & Frankhauser Road

4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (vph)	34	1812	1862	41	52	40
Ideal Flow (vppf)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105	0	0	0	0	50
Storage Lanes	1	0	0	0	1	1
Taper Length (ft)	65	25	25	25	25	25
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Flt Permitted	0.950	0.997			0.950	0.850
Satd. Flow (prot)	1770	3539	3529	0	1770	1583
Flt Permitted	0.064				0.950	
Satd. Flow (perm)	119	3539	3529	0	1770	1583
Right Turn on Red		Yes			Yes	Yes
Satd. Flow (RTOR)		3			2	2
Link Speed (mph)	45	45			30	
Link Distance (ft)	1014	635			614	
Travel Time (s)	15.4	9.6			14.0	
Peak Hour Factor	0.90	0.90	0.91	0.91	0.82	0.82
Adj. Flow (vph)	38	2013	2046	45	63	49
Shared Lane Traffic (%)						
Lane Group Flow (vph)	38	2013	2091	0	63	49
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Right
Median Width(ft)	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	2	2	9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Left	Right	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94	94				
Detector 2 Size(ft)	6	6			6	6
Detector 2 Type	CI+EX	CI+EX			CI+EX	CI+EX
Detector 2 Channel						
Detector 2 Extend (s)	0.0	0.0			0.0	0.0
Turn Type	Perm				Perm	Perm
Protected Phases	2	2	6	4	4	4
Permitted Phases	2	2	6	4	4	4
Detector Phase	2	2	6	4	4	4

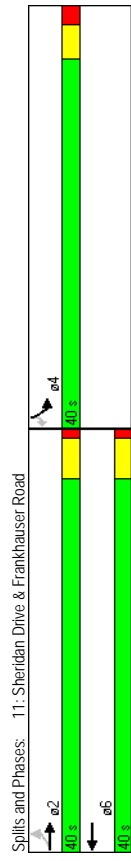
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
11: Sheridan Drive & Frankhauser Road

4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	1.0	1.0
Minimum Split (s)	40.0	40.0	40.0	40.0	31.1	31.1
Total Split (s)	40.0	40.0	40.0	40.0	40.0	40.0
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Maximum Green (s)	35.2	35.2	35.2	35.2	34.9	34.9
Yellow Time (s)	3.9	3.9	3.9	3.9	3.2	3.2
All-Red Time (s)	0.9	0.9	0.9	0.9	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.8	4.8	4.8	4.8	5.1	5.1
LeadLag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0	15.0	15.0	19.0	19.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effct Green (s)	64.9	64.9	64.9	64.9	8.3	8.3
Actuated g/C Ratio	0.81	0.81	0.81	0.81	0.10	0.10
v/c Ratio	0.40	0.70	0.73	0.34	0.34	0.30
Control Delay	19.4	6.5	7.0	37.7	35.8	35.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.4	6.5	7.0	37.7	35.8	35.8
LOS	B	A	A	D	D	D
Approach Delay	6.7	7.0			36.9	
Approach LOS	A	A			D	
Intersection Summary						
Area Type:	Other					
Cycle Length:	80					
Actuated Cycle Length:	80					
Offset:SS (69%):	Referenced to phase 2:EBTL and 6:WBT, Start of Green					
Natural Cycle:	90					
Control Type:	Actuated-Coordinated					
Maximum v/c Ratio:	0.73					
Intersection Signal Delay:	7.7					
Intersection Capacity Utilization:	64.4%					
Analysis Period (min):	15					



Lanes, Volumes, Timings
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
12: Sheridan Drive & I-290 NB

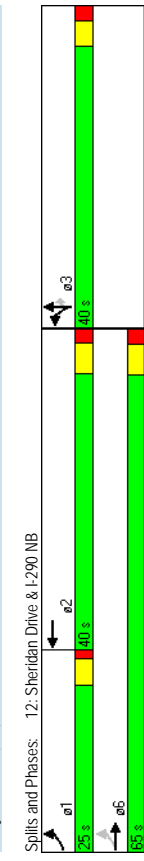
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	355	1429	0	0	1269	683	317	0	439	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	0	0	0	230	0	0	0	0	0
Storage Lanes	1	0	0	0	0	1	0	0	0	0	0
Taper Length (ft)	105	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	0.95	0.91	0.95	1.00	1.00
Flt Protected	0.950				0.948		0.882	0.882	0.850		
Satd. Flow (prot)	1770	5085	0	0	4821	0	1681	1479	1504	0	0
Flt Permitted	0.082						0.950	0.989			
Satd. Flow (perm)	153	5085	0	0	4821	0	1681	1479	1504	0	0
Right Turn on Red		Yes			Yes				Yes		Yes
Satd. Flow (RTOR)		137					34		34		
Link Speed (mph)	45				45		30		30		30
Link Distance (ft)	610				193		830		423		423
Travel Time (s)	9.2				2.9		18.9		9.6		9.6
Peak Hour Factor	0.99	0.99	0.99	0.92	0.92	0.92	0.80	0.80	0.80	0.92	0.92
Adj. Flow (vph)	359	1443	0	0	1379	742	396	0	549	0	0
Shared Lane Traffic (%)							17%		45%		
Lane Group Flow (vph)	359	1443	0	0	2121	0	329	314	302	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Left	Right	Left	Right
Median Width(ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane											
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	15	9	15	15	15	9	15	15
Number of Detectors	1	2			2		1	2	1		
Detector Template	Left	Thru			Thru		Left	Thru	Right		
Leading Detector (ft)	20	100			100		20	100	20		
Trailing Detector (ft)	0	0			0		0	0	0		
Detector 1 Position(ft)	0	0			0		0	0	0		
Detector 1 Size(ft)	20	6			6		20	6	20		
Detector 1 Type	CI+EX	CI+EX			CI+EX		CI+EX	CI+EX	CI+EX		
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0	0.0		
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0	0.0		
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0	0.0		
Detector 2 Position(ft)	94				94		94		94		
Detector 2 Size(ft)	6				6		6		6		
Detector 2 Type	CI+EX				CI+EX		CI+EX		CI+EX		
Detector 2 Channel											
Detector 2 Extend (s)	0.0				0.0		0.0		0.0		
Turn Type	pm+pt				custom		custom		Perm		
Protected Phases	1	6			2		3		3		
Permitted Phases	6				3		3		3		
Detector Phase	1	6			2		3		3		

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
12: Sheridan Drive & I-290 NB

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	1.0	4.0			4.0		4.0	4.0	4.0		4.0
Minimum Split (s)	6.2	33.9			27.8		29.0	29.0	29.0		29.0
Total Split (s)	25.0	65.0	0.0	0.0	40.0	0.0	40.0	40.0	40.0	0.0	0.0
Total Split (%)	23.8%	61.9%	0.0%	0.0%	38.1%	0.0%	38.1%	38.1%	38.1%	0.0%	0.0%
Maximum Green (s)	20.7	59.1			34.2		34.8	34.8	34.8		34.8
Yellow Time (s)	3.2	3.9			3.9		3.2	3.2	3.2		3.2
All-Red Time (s)	1.1	2.0			1.9		2.0	2.0	2.0		2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.3	5.9	4.0	4.0	5.8	4.0	5.2	5.2	5.2	4.0	4.0
LeadLag	Lead				Lag						
Lead-Lag Optimize?	Yes				Yes						
Vehicle Extension (s)	2.0	3.0			3.0		2.0	2.0	2.0		2.0
Recall Mode	None	C-Max			C-Max		None	None	None		None
Walk Time (s)	7.0				7.0						
Flash Dont Walk (s)	21.0				15.0						
Pedestrian Calls (#/hr)	0				0						
Act Effct Green (s)	69.2	67.6			44.3		26.3	26.3	26.3		26.3
Actuated g/C Ratio	0.66	0.64			0.42		0.25	0.25	0.25		0.25
v/c Ratio	0.91	0.44			1.00		0.78	0.79	0.75		0.75
Control Delay	55.6	10.7			51.1		49.1	46.7	43.2		43.2
Queue Delay	0.0	0.0			0.0		0.0	0.0	0.0		0.0
Total Delay	55.6	10.7			51.1		49.1	46.7	43.2		43.2
LOS	E	B			D		D	D	D		D
Approach Delay	19.6				51.1		46.4		46.4		46.4
Approach LOS	B				D		D		D		D



Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
13: Sheridan Drive & Harlem Road

4/24/2014

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔↔	↔↔	↔↔	↔↔
Volume (vph)	1027	604	488	1098	267
Ideal Flow (vphpl)	1900	1900	1900	1900	1900
Storage Length (ft)	0	215	0	140	0
Storage Lanes	1	1	2	2	2
Taper Length (ft)	230	100	100	100	25
Lane Util. Factor	0.95	1.00	0.97	0.95	0.88
Flt Protected	0.850				0.850
Satd. Flow (prot)	3539	1583	3433	3539	3433
Flt Permitted	0.950				0.950
Satd. Flow (perm)	3539	1583	3433	3539	3433
Right Turn on Red	No				Yes
Satd. Flow (RTOR)	45		45	35	114
Link Speed (mph)	314		610	338	
Link Distance (ft)	4.8		9.2	6.6	
Travel Time (s)	0.98	0.95	0.95	0.85	0.85
Peak Hour Factor	1048	616	514	1156	314
Adj. Flow (vph)	1048	616	514	1156	314
Shared Lane Traffic (%)	No	No	No	No	No
Lane Group Flow (vph)	Left	Right	Left	Left	Right
Enter Blocked Intersection	12	24	24	24	24
Lane Alignment	Left	Left	Left	Left	Right
Median Width(ft)	16	0	0	0	0
Link Offset(ft)	16	16	16	16	16
Crosswalk Width(ft)	1.00	1.00	1.00	1.00	1.00
Two way Left Turn Lane	9	15	15	15	9
Headway Factor	2	1	1	2	1
Turning Speed (mph)	Thru	Right	Left	Thru	Left
Number of Detectors	100	20	20	100	20
Detector Template	0	0	0	0	0
Leading Detector (ft)	0	0	0	0	0
Trailing Detector (ft)	0	0	0	0	0
Detector 1 Position(ft)	6	20	20	6	20
Detector 1 Size(ft)	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 1 Type	0.0	0.0	0.0	0.0	0.0
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94	
Detector 2 Size(ft)	6			6	
Detector 2 Type	Ch+Ex			Ch+Ex	
Detector 2 Channel	0.0			0.0	
Detector 2 Extend (s)	2	3	1	6	3
Turn Type	pm+ov	Prot		pm+ov	
Protected Phases	2	3	1	6	3
Permitted Phases	2	3	1	6	3
Detector Phase	2	3	1	6	3

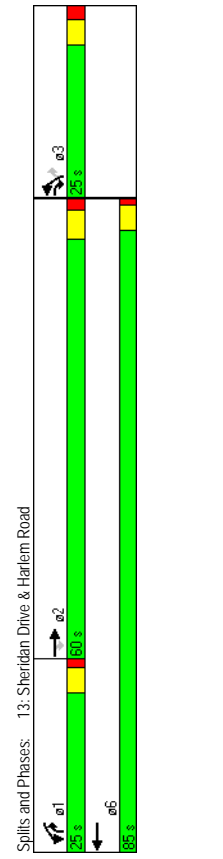
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
13: Sheridan Drive & Harlem Road

4/24/2014

Lane Group	EBT	WBL	WBT	NBL	NBR
Switch Phase	↔	↔	↔	↔	↔
Minimum Initial (s)	1.0	1.0	4.0	1.0	1.0
Minimum Split (s)	30.5	6.2	5.3	32.3	6.2
Total Split (s)	60.0	25.0	25.0	85.0	25.0
Total Split (%)	54.5%	22.7%	22.7%	77.3%	22.7%
Maximum Green (s)	54.5	19.8	20.7	80.7	19.8
Yellow Time (s)	3.9	3.2	3.2	3.2	3.2
All-Red Time (s)	1.6	2.0	1.1	2.0	1.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.2	4.3	4.3	5.2
Lead/Lag	Lag	Lead		Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0
Recall Mode	C-Max	None	None	None	None
Walk Time (s)	7.0		7.0		
Flash Dont Walk (s)	18.0		21.0		
Pedestrian Calls (#/hr)	0		0		
Act Effct Green (s)	59.9	80.1	20.4	85.8	14.7
Actuated g/C Ratio	0.54	0.73	0.19	0.78	0.13
v/c Ratio	0.54	0.53	0.81	0.42	0.68
Control Delay	18.4	9.0	53.5	4.8	53.0
Queue Delay	0.0	0.0	0.0	0.3	0.0
Total Delay	18.4	9.0	53.5	5.1	53.0
LOS	B	A	D	A	D
Approach Delay	15.0		20.0	38.5	
Approach LOS	B		B	D	



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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
14: 1-290 SB & Harlem Road

4/24/2014

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	234	404	583	11	533	524
Ideal Flow (vppf)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	0	0	330	
Storage Lanes	1	1	0	0	1	
Taper Length (ft)	25	25	25	25	75	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	3529	0	1770	3539
Flt Permitted	0.950				0.147	
Satd. Flow (perm)	1770	1583	3529	0	274	3539
Right Turn on Red	Yes	Yes	Yes	Yes		
Satd. Flow (RTOR)	66	2				
Link Speed (mph)	30	35				35
Link Distance (ft)	333	250				456
Travel Time (s)	7.6	4.9				8.9
Peak Hour Factor	0.69	0.69	0.77	0.77	0.92	0.92
Adj. Flow (vph)	339	586	757	14	579	570
Shared Lane Traffic (%)						
Lane Group Flow (vph)	No	No	No	No	No	No
Enter Blocked Intersection	Left	Right	Left	Right	Left	Left
Lane Alignment	12	12				12
Median Width(ft)	0	0				0
Link Offset(ft)	16	16				16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru	Left	Thru	
Leading Detector (ft)	20	20	100	20	100	
Trailing Detector (ft)	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	
Detector 1 Size(ft)	20	20	6	20	6	
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			CI+EX			CI+EX
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type		pm+ov			pm+pl	
Protected Phases	3	1	2	1	1	6
Permitted Phases		3			6	
Detector Phase	3	1	2	1	1	6

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
14: 1-290 SB & Harlem Road

4/24/2014

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	9.2	30.6	9.2	21.0	
Total Split (s)	40.0	35.0	50.0	0.0	35.0	85.0
Total Split (%)	32.0%	28.0%	40.0%	0.0%	28.0%	68.0%
Maximum Green (s)	35.2	30.7	45.0		30.7	80.0
Yellow Time (s)	3.2	3.2	3.6		3.2	3.6
All-Red Time (s)	1.6	1.1	1.4		1.1	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.8	4.3	5.0	4.0	4.3	5.0
Lead/Lag		Lead	Lag		Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Min	None	None	None
Walk Time (s)			10.0			
Flash Dont Walk (s)			15.0			
Pedestrian Calls (#/hr)			0			
Act Effct Green (s)	24.0	60.2	28.6		65.0	64.3
Actuated g/C Ratio	0.24	0.61	0.29		0.66	0.65
v/c Ratio	0.78	0.59	0.75		0.88	0.25
Control Delay	48.9	13.9	37.0		39.9	8.0
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	48.9	13.9	37.0		39.9	8.0
LOS	D	B	D		D	A
Approach Delay	26.7		37.0			24.1
Approach LOS	C		D			C

Intersection Summary

Area Type: Other

Cycle Length: 125

Actuated Cycle Length: 98.3

Natural Cycle: 80

Control Type: Actuated-Uncoordinated

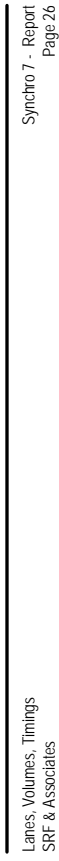
Maximum v/c Ratio: 0.88

Intersection Signal Delay: 28.4

Intersection Capacity Utilization: 70.7%

Analysis Period (min): 15

Spills and Phases: 14: 1-290 SB & Harlem Road



Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
56: Maple Road & Proposed North Driveway 4/24/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔	↔↔	↔↔	↔	↔
Volume (vph)	1294	67	114	981	80	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	225	0	150	0	150
Storage Lanes	0	1	1	1	1	1
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Flt Protected	0.993		0.950		0.950	0.850
Satd. Flow (prot)	3514	0	1770	3539	1770	1583
Flt Permitted	0.950		0.950		0.950	
Satd. Flow (perm)	3514	0	1770	3539	1770	1583
Link Speed (mph)	45		45	30		30
Link Distance (ft)	1000		928	337		337
Travel Time (s)	15.2		14.1	7.7		7.7
Adj. Flow (vph)	1407	73	124	1066	87	163
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1480	0	124	1066	87	163
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12		12	12		12
Link Offset(ft)	0		0	0		0
Crosswalk Width(ft)	16		16	16		16
Two way Left Turn Lane	Yes		Yes			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15	15	15	15	9
Sign Control	Free	Free	Free	Free	Stop	Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	58.6%					
Analysis Period (min)	15					
ICU Level of Service:	B					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
56: Maple Road & Proposed North Driveway 4/24/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔	↔↔	↔↔	↔	↔
Volume (veh/h)	1294	67	114	981	80	150
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%		0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1407	73	124	1066	87	163
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)					6	
Median type			TW/TL			
Median storage (veh)	2			2		
Upstream signal (ft)						
pX, platoon unblocked			1479		2224	740
vC, conflicting volume					1443	
vC1, stage 1 cont vol					781	
vC2, stage 2 cont vol			1479		2224	740
vCu, unblocked vol			4.1		6.8	6.9
IC, 2 stage (s)					5.8	
IF (s)			2.2		3.5	3.3
p0 queue free %			73		43	55
cM capacity (veh/h)			451		153	359
Direction, Lane #						
	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	938	542	124	533	533	250
Volume Left	0	0	124	0	0	87
Volume Right	0	73	0	0	0	163
cSH	1700	1700	451	1700	1700	439
Volume to Capacity	0.55	0.32	0.27	0.31	0.31	0.57
Queue Length 95th (ft)	0	0	28	0	0	87
Control Delay (s)	0.0	0.0	16.0	0.0	0.0	34.5
Lane LOS			C			D
Approach Delay (s)	0.0		1.7			34.5
Approach LOS						D
Intersection Summary						
Average Delay	3.6					
Intersection Capacity Utilization	58.6%					
ICU Level of Service	B					
Analysis Period (min)	15					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
59: Sheridan Drive & Proposed Ltd. Access Driveway 4/24/2014

	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (vph)	30	1857	1683	50	0	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200	0	0	0	0	0
Storage Lanes	1	0	0	0	0	1
Taper Length (ft)	25	0.95	0.95	0.95	1.00	1.00
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Fit	0.950	0.996			0.865	
Flt Protected	0.950					
Satd. Flow (prot)	1770	3539	3525	0	0	1611
Flt Permitted	0.950					
Satd. Flow (perm)	1770	3539	3525	0	0	1611
Link Speed (mph)	45	45	45	30		
Link Distance (ft)	699	969	969	280		
Travel Time (s)	10.6	14.7	14.7	6.4		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	33	2018	1829	54	0	41
Shared Lane Traffic (%)						
Lane Group Flow (vph)	33	2018	1883	0	0	41
Enter Blocked Intersection	No	Yes	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width (ft)	12	12	12	0		
Link Offset (ft)	0	0	0	0		
Crosswalk Width (ft)	16	16	16	16		
Two way Left Turn Lane	Yes	Yes	Yes			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	Free	Free	9	15	9
Sign Control	Free	Free	Free	Stop	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	58.1%					
Analysis Period (min)	15					
ICU Level of Service:	B					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
59: Sheridan Drive & Proposed Ltd. Access Driveway 4/24/2014

	EBL	EBT	WBT	WBR	SBL	SBR
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (veh/h)	30	1857	1683	50	0	38
Sign Control	Free	Free	Free	Stop	Stop	
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	33	2018	1829	54	0	41
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLT	TWLT	TWLT			
Median storage (veh)	2	2				
Upstream signal (ft)		969				
pX, platoon unblocked	0.63				0.63	0.63
vC, conflicting volume	1884				2931	942
vC1, stage 1 conf vol					1857	
vC2, stage 2 conf vol					1074	
vCu, unblocked vol	1219				2890	0
IC, single (s)	4.1				6.8	6.9
IC, 2 stage (s)					5.8	
IF (s)	2.2				3.5	3.3
p0 queue free %	91				100	94
cM capacity (veh/h)	356				129	680
Direction, Lane #						
	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	33	1009	1009	1220	664	41
Volume Left	33	0	0	0	0	0
Volume Right	0	0	0	0	54	41
cSH	356	1700	1700	1700	1700	680
Volume to Capacity	0.09	0.59	0.59	0.72	0.39	0.06
Queue Length 95th (ft)	8	0	0	0	0	5
Control Delay (s)	16.1	0.0	0.0	0.0	0.0	10.6
Lane LOS	C					B
Approach Delay (s)	0.3			0.0		10.6
Approach LOS						B
Intersection Summary						
Average Delay	0.2					
Intersection Capacity Utilization	58.1%					
ICU Level of Service	B					
Analysis Period (min)	15					

A7

**Level of Service Calculations:
Full Development Conditions
with Mitigation**

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
 1: Maple Road & Millersport Hwy SB
 4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (vph)	18	612	831	312	31	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	0	0	0	0	0
Storage Lanes	1	1	1	1	1	1
Taper Length (ft)	35	100	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00
Flt Protected	0.950	0.850	0.950	0.850	0.950	0.850
Satd. Flow (prot)	1770	3539	1583	1770	1770	1583
Flt Permitted	0.323	0.950	0.950	0.950	0.950	0.950
Satd. Flow (perm)	602	3539	1583	1770	1583	1583
Right Turn on Red		Yes	Yes	Yes	Yes	Yes
Satd. Flow (RTOR)		45	45	30	30	106
Link Speed (mph)	555	654	281	6.4	6.4	6.4
Link Distance (ft)	8.4	9.9	6.4	6.4	6.4	6.4
Travel Time (s)	0.91	0.91	0.96	0.96	0.78	0.78
Peak Hour Factor	20	673	866	325	40	106
Adj. Flow (vph)	20	673	866	325	40	106
Shared Lane Traffic (%)						
Lane Group Flow (vph)	20	673	866	325	40	106
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Right
Median Width(ft)	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Right	Left	Right	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94	94	94	94	94	94
Detector 2 Size(ft)	6	6	6	6	6	6
Detector 2 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 2 Channel						
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	2	6	pm+ov	4	4
Protected Phases						
Permitted Phases	2	2	6	6	4	4
Detector Phase	2	2	6	4	4	4

Lanes, Volumes, Timings
 SRF & Associates
 Mitigation Page 1

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
 1: Maple Road & Millersport Hwy SB
 4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	1.0	1.0	1.0
Minimum Split (s)	9.1	9.1	9.1	6.2	6.2	6.2
Total Split (s)	40.0	40.0	40.0	30.0	30.0	30.0
Total Split (%)	57.1%	57.1%	57.1%	42.9%	42.9%	42.9%
Maximum Green (s)	34.9	34.9	34.9	25.4	25.4	25.4
Yellow Time (s)	3.9	3.9	3.9	3.2	3.2	3.2
All-Red Time (s)	1.2	1.2	1.2	1.4	1.4	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	4.6	4.6	4.6
Lead-Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Min	C-Min	C-Min	None	None	None
Act Effct Green (s)	52.7	52.7	70.0	7.6	7.6	7.6
Actuated g/C Ratio	0.75	0.75	0.75	1.00	0.11	0.11
v/c Ratio	0.04	0.25	0.33	0.21	0.21	0.40
Control Delay	2.9	3.1	5.9	0.3	30.2	11.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.9	3.1	5.9	0.3	30.2	11.3
LOS	A	A	A	A	C	B
Approach Delay						
Approach LOS	A	A	A	A	B	B

Intersection Summary
 Area Type: Other
 Cycle Length: 70
 Actuated Cycle Length: 70
 Offset: 5 (7%), Referenced to phase 2:EBTL and 6:WBT. Start of Green
 Natural Cycle: 40
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.40
 Intersection Signal Delay: 4.8
 Intersection Capacity Utilization 36.2%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service A



Splits and Phases: 1: Maple Road & Millersport Hwy SB

Lanes, Volumes, Timings
 SRF & Associates
 Mitigation Page 2

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
2: Maple Road & Millersport Hwy NB

4/24/2014

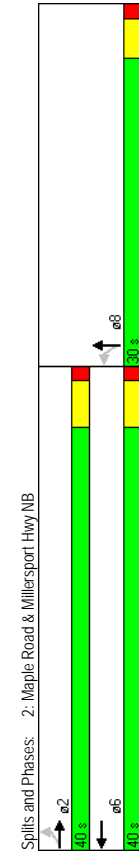
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	42	601	0	0	99%	57	147	1	466	0	0
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	100	0	0	0	0	0	0	0	0	0	0
Storage Length (ft)	1	0	0	0	0	0	0	0	0	0	0
Storage Lanes	50	25	25	25	25	25	25	25	25	25	25
Taper Length (ft)	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor				0.992			0.850				
Flt Protected	0.950				0.950						
Satd. Flow (prot)	1770	3539	0	0	3511	0	1770	1583	0	0	0
Flt Permitted	0.185				0.950						
Satd. Flow (perm)	345	3539	0	0	3511	0	1770	1583	0	0	0
Right Turn on Red		Yes			Yes		Yes	Yes			Yes
Satd. Flow (RTOR)		12			12		170				30
Link Speed (mph)	45				45		30				263
Link Distance (ft)	654				1770		319				7.3
Travel Time (s)	9.9				26.8		7.3				6.0
Peak Hour Factor	0.85	0.85	0.85	0.93	0.93	0.93	0.93	0.93	0.93	0.92	0.92
Adj. Flow (vph)	49	707	0	0	1071	61	158	1	501	0	0
Shared Lane Traffic (%)											
Lane Group Flow (vph)	49	707	0	0	1132	0	158	502	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Left	Right	Left	Right
Median Width(ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	15	9	15	15	9	15	15	9
Number of Detectors	1	2	2	2	2	2	1	2	2	2	2
Detector Template	Left	Thru	Thru	Left	Thru	Thru	Left	Thru	Thru	Thru	Thru
Leading Detector (ft)	20	100	100	100	100	20	100	100	100	100	100
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	6	6	20	6	6	6	6	6
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94				94		94		94		94
Detector 2 Size(ft)	6				6		6		6		6
Detector 2 Type	CI+EX				CI+EX		CI+EX		CI+EX		CI+EX
Detector 2 Channel											
Detector 2 Extend (s)	0.0				0.0		0.0		0.0		0.0
Turn Type	Perm				Perm		Perm		Perm		Perm
Protected Phases	2				6		8		8		8
Permitted Phases	2				6		8		8		8
Detector Phase	2				6		8		8		8

Lanes, Volumes, Timings
SRF & Associates
Mitigation Page 3

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
2: Maple Road & Millersport Hwy NB

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	1.0	1.0	1.0	4.0	4.0	4.0	1.0	1.0	1.0	1.0	1.0
Minimum Split (s)	6.1	6.1	6.1	9.1	9.1	9.1	6.2	6.2	6.2	6.2	6.2
Total Split (s)	40.0	40.0	40.0	0.0	0.0	0.0	30.0	30.0	30.0	0.0	0.0
Total Split (%)	57.1%	57.1%	57.1%	0.0%	0.0%	0.0%	42.9%	42.9%	42.9%	0.0%	0.0%
Maximum Green (s)	34.9	34.9	34.9	34.9	34.9	34.9	25.4	25.4	25.4	25.4	25.4
Yellow Time (s)	3.9	3.9	3.9	3.9	3.9	3.9	3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.2	1.2	1.2	1.2	1.2	1.2	1.4	1.4	1.4	1.4	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time (s)	5.1	5.1	5.1	4.0	4.0	4.0	4.6	4.6	4.6	4.0	4.0
Total Lost Time (s)											
Lead-Lag											
Lead-Lag Optimize?											
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	None	None	None	None	None
Recall Mode	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	39.0	39.0	39.0	39.0	39.0	39.0	21.3	21.3	21.3	21.3	21.3
Actuated g/C Ratio	0.56	0.56	0.56	0.56	0.56	0.56	0.30	0.30	0.30	0.30	0.30
v/c Ratio	0.26	0.36	0.36	0.58	0.58	0.58	0.29	0.29	0.29	0.84	0.84
Control Delay	15.8	10.7	10.7	12.6	12.6	12.6	18.6	18.6	18.6	27.6	27.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.8	10.7	10.7	12.6	12.6	12.6	18.6	18.6	18.6	27.6	27.6
LOS	B	B	B	B	B	B	B	B	B	C	C
Approach Delay											
Approach LOS	B	B	B	B	B	B	B	B	B	C	C
Intersection Summary											
Area Type:	Other										
Cycle Length:	70										
Actuated Cycle Length:	70										
Offset:	5 (7%), Referenced to phase 2:EBTL and 6:WBT, Start of Green										
Natural Cycle:	50										
Control Type:	Actuated-Coordinated										
Maximum v/c Ratio:	0.84										
Intersection Signal Delay:	15.5										
Intersection LOS:	B										
Intersection Capacity Utilization:	71.9%										
Analysis Period (min):	15										



Splits and Phases: 2: Maple Road & Millersport Hwy NB

Lanes, Volumes, Timings
SRF & Associates
Mitigation Page 4

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
3: Maple Road & Maplemere Road

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	21	931	46	12	1044	28	43	3	16	34	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	70	0	0	0	0	0	0	0	0
Storage Lanes	1	0	1	0	0	0	0	0	0	0	0
Taper Length (ft)	50	25	50	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Flt Permitted	0.950	0.993	0.950	0.996	0.950	0.965	0.967	0.967	0.967	0.957	0.957
Satd. Flow (prot)	1770	3514	0	1770	3525	0	1738	0	1738	0	1724
Flt Permitted	0.204	0.217	0.217	0.217	0.217	0.217	0.217	0.217	0.217	0.217	0.217
Right Turn on Red	380	3514	0	404	3525	0	1328	0	1307	0	1307
Satd. Flow (RTOR)	10	Yes	6	Yes	6	Yes	25	Yes	28	Yes	28
Link Speed (mph)	45	45	45	45	45	45	30	30	30	30	30
Link Distance (ft)	1770	1106	1106	1106	1106	1106	378	378	402	402	402
Travel Time (s)	26.8	16.8	16.8	16.8	16.8	16.8	8.6	8.6	9.1	9.1	9.1
Peak Hour Factor	0.86	0.86	0.86	0.91	0.91	0.91	0.60	0.60	0.60	0.58	0.58
Adj. Flow (vph)	24	1083	53	13	1147	31	72	5	27	59	0
Shared Lane Traffic (%)	24	1136	0	13	1178	0	0	104	0	0	87
Lane Group Flow (vph)	No	No	No	No	No	No	No	No	No	No	No
Enter Blocked Intersection	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	12	12	12	12	12	12	0	0	0	0	0
Link Offset(ft)	16	16	16	16	16	16	16	16	16	16	16
Crosswalk Width(ft)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9	15	9	15	15	9
Number of Detectors	1	2	1	2	1	2	1	2	1	1	2
Detector Template	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Thru
Leading Detector (ft)	20	100	20	100	20	100	20	100	20	100	100
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	6	20	6	20	6	20	6	6
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94	94	94	94	94	94	94	94	94	94	94
Detector 2 Size(ft)	6	6	6	6	6	6	6	6	6	6	6
Detector 2 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 2 Channel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Extend (s)	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm
Turn Type	2	2	6	6	6	6	8	8	8	4	4
Protected Phases	2	2	6	6	6	6	8	8	8	4	4
Permitted Phases	2	2	6	6	6	6	8	8	8	4	4
Detector Phase	2	2	6	6	6	6	8	8	8	4	4

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
3: Maple Road & Maplemere Road

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	9.0	9.0	9.0	9.0	9.0	27.0	27.0	27.0	27.0	27.0
Minimum Split (%)	46.0	46.0	0.0	46.0	46.0	0.0	29.0	29.0	0.0	29.0	29.0
Total Split (s)	61.3%	61.3%	0.0%	61.3%	61.3%	0.0%	38.7%	38.7%	0.0%	38.7%	38.7%
Total Split (%)	41.0	41.0	41.0	41.0	41.0	41.0	24.0	24.0	0.0	24.0	24.0
Maximum Green (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Yellow Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Lead-Lag Optimize?											
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	None	None	None	None	None
Recall Mode	Min	Min	Min	Min	Min	Min	None	None	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	15.0	15.0	15.0	15.0	15.0
Flash Dont Walk (s)											
Pedestrian Calls (#/hr)											
Act Effct Green (s)	27.4	27.4	27.4	27.4	27.4	27.4	0	0	0	0	0
Actuated g/C Ratio	0.65	0.65	0.65	0.65	0.65	0.65	0.20	0.20	0.20	0.20	0.20
v/c Ratio	0.10	0.49	0.05	0.51	0.51	0.51	0.36	0.36	0.36	0.31	0.31
Control Delay	6.1	6.5	5.4	6.7	6.7	6.7	16.6	16.6	16.6	14.9	14.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.1	6.5	5.4	6.7	6.7	6.7	16.6	16.6	16.6	14.9	14.9
LOS	A	A	A	A	A	A	B	B	B	B	B
Approach Delay	6.5	6.5	6.7	6.7	6.7	6.7	16.6	16.6	16.6	14.9	14.9
Approach LOS	A	A	A	A	A	A	B	B	B	B	B
Intersection Summary	Other										
Area Type:	Other										
Cycle Length:	75										
Actuated Cycle Length:	41.9										
Natural Cycle:	55										
Control Type:	Actuated-Uncoordinated										
Maximum v/c Ratio:	0.51										
Intersection Signal Delay:	7.3										
Intersection Capacity Utilization:	42.2%										
Analysis Period (min):	15										



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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
4: Maple Road & Donna Lea Blvd

4/24/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔↔	↔↔	↔↔	↔↔	↔↔
Volume (vph)	976	6	13	1059	24	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	50	0	0	0	0
Storage Lanes	0	1	0	1	0	0
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Flt Protected	0.999		0.950		0.904	
Flt Permitted			0.950		0.986	
Satd. Flow (prot)	3536	0	1770	3539	1660	0
Satd. Flow (perm)	3536	0	1770	3539	1660	0
Link Speed (mph)	45		45		30	
Link Distance (ft)	1106		1002		355	
Travel Time (s)	16.8		15.2		8.1	
Peak Hour Factor	0.79	0.79	0.87	0.87	0.76	0.76
Adj. Flow (vph)	1235	8	15	1217	32	80
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1243	0	15	1217	112	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12		12		12	
Link Offset(ft)	0		0		0	
Crosswalk Width(ft)	16		16		16	
Two way Left Turn Lane	Yes		Yes		Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15	15	15	15	9
Sign Control	Free	Free	Free	Free	Stop	Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	41.0%					
Analysis Period (min)	15					
	ICU Level of Service: A					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
4: Maple Road & Donna Lea Blvd

4/24/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔↔	↔↔	↔↔	↔↔	↔↔
Volume (veh/h)	976	6	13	1059	24	61
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%		0%		0%	
Peak Hour Factor	0.79	0.79	0.87	0.87	0.76	0.76
Hourly flow rate (vph)	1235	8	15	1217	32	80
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLT		TWLT		TWLT	
Median storage (veh)	2		2		2	
Upstream signal (ft)	1106		1002		1002	
pX, platoon unblocked			0.85		0.92	0.85
vC, conflicting volume			1243		1878	622
vC1, stage 1 conf vol					1239	
vC2, stage 2 conf vol					639	
vCu, unblocked vol			930		1119	197
IC, single (s)			4.1		6.8	6.9
IC, 2 stage (s)					5.8	
IF (s)			2.2		3.5	3.3
p0 queue free %			98		89	88
cM capacity (veh/h)			621		282	688
Direction, Lane #						
	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	824	419	15	609	609	112
Volume Left	0	0	15	0	0	32
Volume Right	0	8	0	0	0	80
cSH	1700	1700	621	1700	1700	489
Volume to Capacity	0.48	0.25	0.02	0.36	0.36	0.23
Queue Length 95th (ft)	0	0	2	0	0	22
Control Delay (s)	0.0	0.0	10.9	0.0	0.0	14.5
Lane LOS			B		B	B
Approach Delay (s)	0.0		0.1			14.5
Approach LOS			B			B
Intersection Summary						
Average Delay	0.7					
Intersection Capacity Utilization	41.0%					
Analysis Period (min)	15					
	ICU Level of Service: A					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
5: Maple Road & Audubon Golf Club

4/24/2014



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	1	1075	4	1	1126	2	13	0	0	3	1
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	100	0	50	0	50	0	0	0	0	0	0
Storage Length (ft)	1	0	1	0	1	0	0	0	0	0	0
Storage Lanes	25	25	25	25	25	25	25	25	25	25	25
Taper Length (ft)	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.999						0.976				
Flt Protected	0.950			0.950			0.960				0.950
Satd. Flow (prot)	1770	3536	0	1770	3539	0	1745	0	1745	0	1770
Flt Permitted	0.950			0.950			0.960				0.950
Satd. Flow (perm)	1770	3536	0	1770	3539	0	1745	0	1745	0	1770
Link Speed (mph)	45	45	45	45	45	45	30	30	30	30	30
Link Distance (ft)	446	446	446	556	556	469	469	111	111	111	111
Travel Time (s)	6.8	8.4	8.4	10.7	10.7	2.5	2.5				
Adj. Flow (vph)	1	1168	4	1	1224	2	14	0	3	1	0
Shared Lane Traffic (%)											
Lane Group Flow (vph)	1	1172	0	1	1226	0	0	17	0	0	1
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Right
Median Width (ft)	12	12	12	12	12	12	0	0	0	0	0
Link Offset (ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width (ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane	Yes			Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9	15	15	9	15	9
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop
Intersection Summary											
Area Type:	Other										
Control Type:	Unsignalized										
Intersection Capacity Utilization	41.2%										
Analysis Period (min)	15										

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
5: Maple Road & Audubon Golf Club

4/24/2014



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	1	1075	4	1	1126	2	13	0	3	1	0
Volume (veh/h)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	1168	4	1	1224	2	14	0	3	1	0
Pedestrians											
Lane Width (ft)											
Walking Speed (ft/s)											
Percent Blockage											
Right turn flare (veh)											
Median type											
Median storage (veh)											
Upstream signal (ft)											
pX, platoon unblocked											
vC, conflicting volume	1226		1173				1787	2401	586	1817	2402
vC1, stage 1 cont vol							1173	1173	1227	1227	
vC2, stage 2 cont vol							614	1228	590	1175	
vCu, unblocked vol	1226		1173				1787	2401	586	1817	2402
IC, single (s)	4.1		4.1				7.5	6.5	6.9	7.5	6.5
IC, 2 stage (s)							6.5	5.5	6.5	5.5	
IF (s)	2.2		2.2				3.5	4.0	3.3	3.5	4.0
p0 queue free %	100		100				92	100	99	99	100
cM capacity (veh/h)	564		591				184	177	453	173	177
Direction, Lane #											
EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1				
1	779	394	1	816	410	17	1				
Volume Total	1	0	0	1	0	0	14	1			
Volume Left	0	0	4	0	0	2	3	0			
cSH	564	1700	1700	591	1700	1700	207	173			
Volume to Capacity	0.00	0.46	0.23	0.00	0.48	0.24	0.08	0.01			
Queue Length 95th (ft)	0	0	0	0	0	0	7	0			
Control Delay (s)	11.4	0.0	0.0	11.1	0.0	0.0	23.9	25.9			
Lane LOS	B			B			C	D			
Approach Delay (s)	0.0			0.0			23.9	25.9			
Approach LOS				C			C	D			
Intersection Summary											
Average Delay	0.2										
Intersection Capacity Utilization	41.2%										
Analysis Period (min)	15										
ICU Level of Service	A										

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
6: Maple Road & North Forest Road

4/24/2014

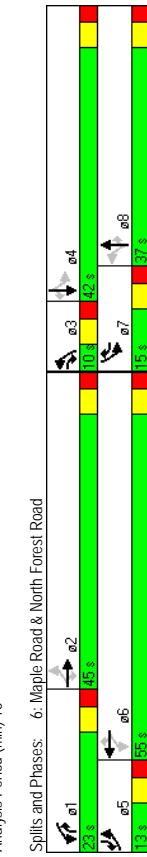
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	102	866	84	253	836	90	231	185	123	363	185
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	415	220	315	220	315	150	125	220	250	250	250
Storage Lanes	1	1	1	1	1	1	1	1	1	1	1
Taper Length (ft)	90	115	60	25	95	25	95	25	90	25	25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.950		0.950		0.850		0.850		0.850		0.850
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1863	1583	1770	1863
Flt Permitted	0.247		0.098		0.198		0.353		0.353		0.353
Satd. Flow (perm)	460	3539	1583	183	3539	1583	369	1863	1583	658	1863
Right Turn on Red	Yes		Yes		No		Yes		Yes		Yes
Satd. Flow (RTOR)	91		91		52		52		52		76
Link Speed (mph)	45		45		45		35		35		35
Link Distance (ft)	1705		820		529		608		608		608
Travel Time (s)	25.8		12.4		10.3		11.8		11.8		11.8
Peak Hour Factor	0.90	0.90	0.95	0.95	0.95	0.90	0.90	0.90	0.90	0.80	0.80
Adj. Flow (vph)	113	962	93	266	880	95	102	257	206	154	454
Shared Lane Traffic (%)											
Lane Group Flow (vph)	113	962	93	266	880	95	102	257	206	154	454
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Median Width (ft)	12		12		12		12		12		12
Link Offset (ft)	0		0		0		0		0		0
Crosswalk Width (ft)	16		16		16		16		16		16
Two way Left Turn Lane	Yes		Yes		Yes		Yes		Yes		Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	2	1	2	1	2	1	15	15
Number of Detectors	1	2	1	1	1	1	1	2	1	1	2
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru
Leading Detector (ft)	20	100	20	100	20	100	20	100	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size (ft)	20	6	20	20	6	20	20	6	20	20	6
Detector 1 Type	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position (ft)	94		94		94		94		94		94
Detector 2 Size (ft)	6		6		6		6		6		6
Detector 2 Type	Ch+Ex		Ch+Ex		Ch+Ex		Ch+Ex		Ch+Ex		Ch+Ex
Detector 2 Channel											
Detector 2 Extend (s)	0.0		0.0		0.0		0.0		0.0		0.0
Turn Type	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+ov
Protected Phases	5	2	3	1	6	7	3	8	1	7	4
Permitted Phases	2	2	6	6	6	8	8	8	4	4	4
Detector Phase	5	2	3	1	6	7	3	8	1	7	4

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
6: Maple Road & North Forest Road

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	1.0	4.0	1.0	1.0	4.0	1.0	1.0	4.0	1.0	1.0	4.0
Minimum Split (s)	7.0	35.0	7.0	7.0	35.0	7.0	7.0	35.0	7.0	7.0	35.0
Total Split (s)	13.0	45.0	10.0	23.0	55.0	15.0	10.0	37.0	23.0	15.0	42.0
Total Split (%)	10.8%	37.5%	8.3%	19.2%	45.8%	12.5%	8.3%	30.8%	19.2%	12.5%	35.0%
Maximum Green (s)	7.0	39.0	4.0	17.0	49.0	9.0	4.0	31.0	17.0	9.0	36.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Walk Time (s)	7.0		7.0		7.0		7.0		7.0		7.0
Flash Dont Walk (s)	22.0		22.0		22.0		22.0		22.0		22.0
Pedestrian Calls (#/hr)	0		0		0		0		0		0
Act Effct Green (s)	41.7	34.7	44.9	56.1	43.3	58.3	30.0	25.9	47.7	39.6	30.7
Actuated g/C Ratio	0.38	0.32	0.41	0.51	0.40	0.53	0.27	0.24	0.44	0.36	0.28
v/c Ratio	0.44	0.86	0.13	0.83	0.63	0.11	0.67	0.58	0.29	0.47	0.87
Control Delay	21.4	44.6	5.3	49.5	29.2	13.9	50.8	43.7	16.2	29.8	56.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.4	44.6	5.3	49.5	29.2	13.9	50.8	43.7	16.2	29.8	56.3
LOS	C	D	A	D	C	B	D	D	B	C	E
Approach Delay	39.2		32.4		32.4		35.0		35.0		40.6
Approach LOS	D		C		C		C		C		D
Intersection Summary	Other										
Area Type:	Other										
Cycle Length:	120										
Actuated Cycle Length:	109.6										
Natural Cycle:	85										
Control Type:	Actuated-Uncoordinated										
Maximum v/c Ratio:	0.87										
Intersection Signal Delay:	36.7										
Intersection Capacity Utilization:	82.2%										
Analysis Period (min):	15										



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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
7: Sheridan Drive & Mill Street

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	6	1343	130	220	1060	9	106	21	125	30	146
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	100	0	150	0	150	0	40	0	75	0	75
Storage Length (ft)	1	0	1	0	1	0	1	0	1	0	1
Storage Lanes	65	25	60	25	60	25	25	25	25	25	25
Taper Length (ft)	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.987			0.999			0.872			0.983	
Flt Protected	0.950			0.950			0.950			0.950	
Satd. Flow (prot)	1770	3493	0	1770	3536	0	1770	1624	0	1770	1831
Flt Permitted	0.223			0.072			0.207			0.598	
Satd. Flow (perm)	415	3493	0	134	3536	0	386	1624	0	1114	1831
Right Turn on Red		No		Yes			Yes		No	Yes	
Satd. Flow (RTOR)				1						4	
Link Speed (mph)	45			45			30			30	
Link Distance (ft)	2782			977			838			362	
Travel Time (s)	42.2			14.8			19.0			8.2	
Peak Hour Factor	0.86	0.86	0.89	0.89	0.89	0.89	0.56	0.56	0.56	0.61	0.61
Adj. Flow (vph)	7	1562	151	247	1191	10	189	38	223	49	239
Shared Lane Traffic (%)											
Lane Group Flow (vph)	7	1713	0	247	1201	0	189	261	0	49	270
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset(ft)	0			0			0			0	
Crosswalk Width(ft)	16			16			16			16	
Two way Left Turn Lane	Yes			Yes			Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	15	9	15	15	9	15	15	9
Number of Detectors	1	2	1	2	1	2	1	2	1	2	1
Detector Template	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left
Leading Detector (ft)	20	100	20	100	20	100	20	100	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	6	20	6	20	6	20	6	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94			94			94	
Detector 2 Size(ft)	6			6			6			6	
Detector 2 Type	CI+EX			CI+EX			CI+EX			CI+EX	
Detector 2 Channel											
Detector 2 Extend (s)	0.0			0.0			0.0			0.0	
Turn Type	Perm			pm+pt			pm+pt			Perm	
Protected Phases	2			6			3			8	
Permitted Phases	2			6			8			4	
Detector Phase	2			1			3			4	

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
7: Sheridan Drive & Mill Street

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase	4.0	4.0	1.0	4.0	1.0	4.0	1.0	4.0	1.0	4.0	4.0
Minimum Initial (s)	28.3	28.3	6.2	28.3	6.2	28.3	6.2	28.3	6.2	28.3	34.2
Minimum Split (s)	52.0	52.0	0.0	25.0	77.0	0.0	24.0	58.0	0.0	34.0	34.0
Total Split (s)	38.5%	38.5%	0.0%	18.5%	57.0%	0.0%	17.8%	43.0%	0.0%	25.2%	25.2%
Total Split (%)	46.5	46.5	20.7	71.5	18.8	52.8	18.8	52.8	0.0	28.8	28.8
Maximum Green (s)	4.3	4.3	3.2	4.3	3.2	4.3	3.2	4.3	3.2	3.2	3.2
Yellow Time (s)	1.2	1.2	1.1	1.2	1.1	1.2	1.1	1.2	1.1	1.1	1.1
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	5.5	5.5	4.0	4.3	5.5	4.0	5.2	5.2	4.0	5.2	5.2
Total Lost Time (s)	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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
Recall Mode	Max	Max	None	Max	None	Max	None	None	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0	15.0	15.0	15.0	15.0	22.0	22.0	22.0	22.0	22.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0	0	0	0
Act Effct Green (s)	51.0	51.0	73.0	71.8	42.7	42.7	42.7	42.7	42.7	22.6	22.6
Actuated g/C Ratio	0.41	0.41	0.58	0.57	0.34	0.34	0.34	0.34	0.34	0.18	0.18
v/c Ratio	0.04	1.21	0.84	0.59	0.64	0.47	0.64	0.47	0.24	0.81	0.81
Control Delay	29.7	133.3	56.3	19.9	40.1	35.0	40.1	35.0	40.1	47.4	67.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.7	133.3	56.3	19.9	40.1	35.0	40.1	35.0	40.1	47.4	67.8
LOS	C	F	E	B	D	C	D	C	D	D	E
Approach Delay	132.9			26.1			37.1			64.7	
Approach LOS	F			C			D			E	

Intersection Summary

Area Type:	Other
Cycle Length:	135
Actuated Cycle Length:	125.3
Natural Cycle:	140
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	1.21
Intersection Signal Delay:	77.2
Intersection Capacity Utilization:	85.0%
Analysis Period (min):	15



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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
8: Sheridan Drive & North Forest Road

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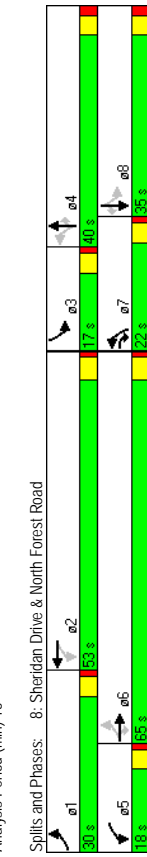
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	94	1367	223	181	1119	19	242	342	23	11	444
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	405	170	260	0	180	0	265	180	200	200	200
Storage Lanes	1	1	1	0	1	0	1	1	1	1	1
Taper Length (ft)	200	25	200	25	200	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95
Flt	0.850	0.850	0.997		0.850		0.850		0.850		0.850
Flt Protected	0.950		0.950		0.950		0.950		0.950		0.950
Satd. Flow (prot)	1770	3539	1583	1770	3529	0	1770	1863	1583	1770	3539
Flt Permitted	0.101		0.062		0.191		0.438		0.438		0.438
Satd. Flow (perm)	188	3539	1583	1115	3529	0	356	1863	1583	816	3539
Right Turn on Red	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Satd. Flow (RTOR)	66		66		1		26		26		311
Link Speed (mph)	45		45		45		40		40		35
Link Distance (ft)	969		2219		547		354		354		6.9
Travel Time (s)	14.7		33.6		9.3		6.9		6.9		0.438
Peak Hour Factor	0.95	0.95	0.92	0.92	0.92	0.92	0.90	0.90	0.90	0.84	0.84
Adj. Flow (vph)	99	1439	235	197	1237	21	269	380	26	13	529
Shared Lane Traffic (%)											
Lane Group Flow (vph)	99	1439	235	197	1237	0	269	380	26	13	529
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Left	Left	Right	Left	Left	Right
Median Width (ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset (ft)	0		0		0		0		0		0
Crosswalk Width (ft)	16		16		16		16		16		16
Two way Left Turn Lane	Yes		Yes		Yes		Yes		Yes		Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9	15	9	15	9	15
Number of Detectors	1	2	1	2	1	2	1	2	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru
Leading Detector (ft)	20	100	20	100	20	100	20	100	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size (ft)	20	6	20	20	6	20	6	20	20	6	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position (ft)	94		94		94		94		94		94
Detector 2 Size (ft)	6		6		6		6		6		6
Detector 2 Type	CI+EX		CI+EX		CI+EX		CI+EX		CI+EX		CI+EX
Detector 2 Channel											
Detector 2 Extend (s)	0.0		0.0		0.0		0.0		0.0		0.0
Turn Type	pm+pt	pm+ov	pm+pt	pm+pt	pm+pt	pm+pt	pm+pt	pm+pt	pm+pt	pm+pt	pm+pt
Protected Phases	1	6	7	5	2	7	4	3	8	3	8
Permitted Phases	6	6	6	2	4	4	4	4	8	8	8
Detector Phase	1	6	7	5	2	7	4	4	4	3	8

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
8: Sheridan Drive & North Forest Road

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.3	27.9	21.0	8.3	27.9	21.0	27.2	27.2	8.3	27.2	27.2
Total Split (s)	30.0	65.0	22.0	18.0	53.0	0.0	22.0	40.0	40.0	17.0	35.0
Total Split (%)	21.4%	46.4%	15.7%	12.9%	37.9%	0.0%	15.7%	28.6%	28.6%	12.1%	25.0%
Maximum Green (s)	25.7	59.9	17.7	13.7	47.9	17.7	34.9	34.9	12.7	29.9	29.9
Yellow Time (s)	3.2	3.9	3.2	3.2	3.9	3.2	3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.1	1.2	1.1	1.1	1.2	1.1	1.1	1.1	1.1	1.1	1.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.3	5.1	4.3	4.3	5.1	4.0	4.3	5.1	5.1	4.3	5.1
Lead/Lag	Lead	Lead	Lead	Lead	Lead	Lead	Lead	Lead	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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
Recall Mode	None	Max	None	None	Max	None	None	None	None	None	None
Walk Time (s)	7.0		7.0		7.0		7.0		7.0		7.0
Flash Dont Walk (s)	15.0		15.0		15.0		15.0		15.0		15.0
Pedestrian Calls (#/hr)	0		0		0		0		0		0
Act Effct Green (s)	70.1	60.0	82.8	77.4	64.0	49.1	43.9	43.9	33.3	26.3	26.3
Actuated g/C Ratio	0.52	0.44	0.61	0.57	0.47	0.36	0.32	0.32	0.24	0.19	0.19
v/c Ratio	0.48	0.92	0.24	0.87	0.75	0.86	0.63	0.63	0.05	0.77	0.64
Control Delay	22.3	47.2	9.7	68.6	33.8	59.5	45.9	45.9	12.5	29.0	60.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.3	47.2	9.7	68.6	33.8	59.5	45.9	45.9	12.5	29.0	60.5
LOS	C	D	A	E	C	E	D	D	B	C	E
Approach Delay	40.8		38.6		38.6		50.0		50.0		41.5
Approach LOS	D		D		D		D		D		D
Intersection Summary	Other										
Area Type:	Other										
Cycle Length:	140										
Actuated Cycle Length:	136.1										
Natural Cycle:	105										
Control Type:	Actuated-Uncoordinated										
Maximum v/c Ratio:	0.92										
Intersection Signal Delay:	41.6										
Intersection Capacity Utilization:	89.2%										
Analysis Period (min):	15										



Spills and Phases: 8: Sheridan Drive & North Forest Road
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
10: Sheridan Drive & Proposed South Driveway

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	214	1591	6	4	1523	107	16	0	9	110	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	350	0	75	0	425	0	0	0	0	0	0
Storage Lanes	1	0	1	0	1	0	0	0	0	0	1
Taper Length (ft)	25	25	25	25	75	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.950	0.999	0.950	0.950	0.850	0.969	0.951	0.951	0.951	0.950	0.850
Satd. Flow (prot)	1770	3536	0	1770	3539	1583	0	1777	0	0	1770
Flt Permitted	0.060	0.109	0.799	0.799	0.799	0.734	0.734	0.734	0.734	0.734	0.734
Satd. Flow (perm)	112	3536	0	203	3539	1583	0	1415	0	0	1367
Right Turn on Red	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Satd. Flow (RTOR)	1	1	1	1	1	1	1	1	1	1	1
Link Speed (mph)	45	45	45	45	45	45	45	45	45	45	45
Link Distance (ft)	635	699	699	699	699	699	699	699	699	699	699
Travel Time (s)	9.6	10.6	10.6	10.6	10.6	10.6	10.6	10.6	10.6	10.6	10.6
Peak Hour Factor	0.92	0.88	0.88	0.90	0.90	0.92	0.69	0.92	0.69	0.92	0.92
Adj. Flow (vph)	233	1808	7	4	1692	116	23	0	13	120	0
Shared Lane Traffic (%)	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	No	No	No	No	No	No	No	No	No	No	No
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset(ft)	16	16	16	16	16	16	16	16	16	16	16
Crosswalk Width(ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	15	9	15	15	9	15	15	9
Number of Detectors	1	2	1	2	1	1	1	2	1	2	1
Detector Template	Left	Thru	Left	Right	Left	Thru	Left	Thru	Left	Thru	Right
Leading Detector (ft)	20	100	20	100	20	20	100	20	100	20	100
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	6	20	6	20	6	20	6	20
Detector 1 Type	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 1 Channel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94	94	94	94	94	94	94	94	94	94	94
Detector 2 Size(ft)	6	6	6	6	6	6	6	6	6	6	6
Detector 2 Type	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 2 Channel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	pm+pt	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	pm+ov
Protected Phases	7	4	8	8	8	2	2	2	2	6	7
Permitted Phases	4	8	8	8	8	2	2	2	2	6	6
Detector Phase	7	4	8	8	8	2	2	2	2	6	7

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
10: Sheridan Drive & Proposed South Driveway

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
Total Split (s)	29.0	86.0	0.0	57.0	57.0	57.0	24.0	24.0	0.0	24.0	29.0
Total Split (%)	26.4%	78.2%	0.0%	51.8%	51.8%	51.8%	21.8%	21.8%	0.0%	21.8%	26.4%
Maximum Green (s)	24.0	81.0	52.0	52.0	52.0	19.0	19.0	19.0	19.0	19.0	24.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	5.0	5.0	5.0	4.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	C-Max	Max	Max	None	None	None
Walk Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0	0	0	0
Act Effct Green (s)	81.0	81.0	61.4	61.4	61.4	19.0	19.0	19.0	19.0	19.0	38.6
Actuated g/C Ratio	0.74	0.74	0.56	0.56	0.56	0.17	0.17	0.17	0.17	0.17	0.35
v/c Ratio	0.77	0.70	0.04	0.86	0.12	0.14	0.14	0.14	0.51	0.51	0.31
Control Delay	42.9	5.5	14.8	27.2	3.0	29.4	29.4	29.4	49.8	25.2	25.2
Queue Delay	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.9	5.7	14.8	27.2	3.0	29.4	29.4	29.4	49.8	25.2	25.2
LOS	D	A	B	C	A	C	C	C	D	D	C
Approach Delay	9.9	25.6	25.6	25.6	25.6	25.6	25.6	25.6	25.6	25.6	25.6
Approach LOS	A	C	C	C	C	C	C	C	C	C	D
Intersection Summary	Other										
Area Type:	Other										
Cycle Length:	110										
Actuated Cycle Length:	110										
Offset:	92 (84%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green										
Natural Cycle:	90										
Control Type:	Actuated-Coordinated										
Maximum v/c Ratio:	0.86										
Intersection Signal Delay:	18.7										
Intersection Capacity Utilization:	75.1%										
Analysis Period (min):	15										

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
11: Sheridan Drive & Frankhauser Road

4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (vph)	26	1772	1673	24	38	29
Ideal Flow (vppf)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105	0	0	0	0	50
Storage Lanes	1	0	0	1	1	1
Taper Length (ft)	65	25	25	25	25	25
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Flt Permitted	0.950	0.998			0.850	
Satd. Flow (prot)	1770	3539	3532	0	1770	1583
Flt Permitted	0.107				0.950	
Satd. Flow (perm)	199	3539	3532	0	1770	1583
Right Turn on Red		Yes			Yes	
Satd. Flow (RTOR)		3			31	
Link Speed (mph)	45	45			30	
Link Distance (ft)	101.4	635			614	
Travel Time (s)	15.4	9.6			14.0	
Peak Hour Factor	0.89	0.89	0.94	0.94	0.73	0.73
Adj. Flow (vph)	29	1991	1780	26	52	40
Shared Lane Traffic (%)						
Lane Group Flow (vph)	29	1991	1806	0	52	40
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Right
Median Width(ft)	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	2	2	9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Left	Right	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94	94				
Detector 2 Size(ft)	6	6			6	
Detector 2 Type	CI+EX	CI+EX			CI+EX	
Detector 2 Channel						
Detector 2 Extend (s)	0.0	0.0			0.0	
Turn Type	Perm				Perm	
Protected Phases	2	2	6	4	4	4
Permitted Phases	2	2	6	4	4	4

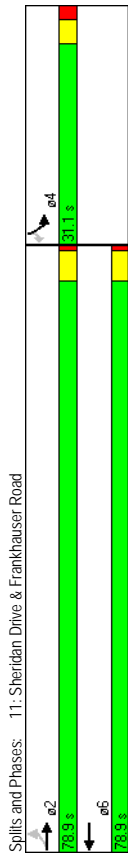
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
11: Sheridan Drive & Frankhauser Road

4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	1.0	1.0
Minimum Split (s)	40.0	40.0	40.0	40.0	31.1	31.1
Total Split (s)	78.9	78.9	78.9	78.9	0.0	31.1
Total Split (%)	71.7%	71.7%	71.7%	71.7%	0.0%	28.3%
Maximum Green (s)	74.1	74.1	74.1	74.1	26.0	26.0
Yellow Time (s)	3.9	3.9	3.9	3.9	3.2	3.2
All-Red Time (s)	0.9	0.9	0.9	0.9	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.8	4.8	4.8	4.8	5.1	5.1
Lead-Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0	15.0	15.0	19.0	19.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effct Green (s)	94.5	94.5	94.5	94.5	8.7	8.7
Actuated g/C Ratio	0.86	0.86	0.86	0.86	0.08	0.08
v/c Ratio	0.17	0.65	0.60	0.37	0.26	0.26
Control Delay	5.7	7.5	3.3	54.8	24.6	24.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.7	7.5	3.3	54.8	24.6	24.6
LOS	A	A	A	A	D	C
Approach Delay	7.5	3.3	41.7			
Approach LOS	A	A	D			
Intersection Summary						
Area Type:	Other					
Cycle Length:	110					
Actuated Cycle Length:	110					
Offset:	7.3 (66%), Referenced to phase 2:EBTL and 6:WBT, Start of Green					
Natural Cycle:	90					
Control Type:	Actuated-Coordinated					
Maximum v/c Ratio:	0.65					
Intersection Signal Delay:	6.3					
Intersection Capacity Utilization:	60.6%					
Analysis Period (min):	15					



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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
12: Sheridan Drive & I-290 NB

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	249	1557	0	0	1120	538	269	0	277	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	0	0	230	0	0	0	0	0	0
Storage Lanes	1	0	0	0	1	0	0	1	0	0	0
Taper Length (ft)	105	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	0.91	0.91	0.95	1.00	1.00
Flt Protected	0.950				0.951			0.916	0.850		
Satd. Flow (prot)	1770	5085	0	0	4836	0	1681	1519	1504	0	0
Flt Permitted	0.074				0.950	0.978					
Satd. Flow (perm)	138	5085	0	0	4836	0	1681	1519	1504	0	0
Right Turn on Red			Yes			Yes			Yes		Yes
Satd. Flow (RTOR)			142				42		42		
Link Speed (mph)	45		45		45		30		30		30
Link Distance (ft)	197		193		193		830		830		423
Travel Time (s)	3.0		2.9		2.9		18.9		18.9		9.6
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.88	0.88	0.88	0.92	0.92
Adj. Flow (vph)	245	1656	0	0	1191	572	306	0	315	0	0
Shared Lane Traffic (%)							30%		37%		
Lane Group Flow (vph)	265	1656	0	0	1763	0	214	209	198	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Right	Left	Left	Right	Left	Right
Median Width(ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width(ft)	16		16		16		16		16		16
Two way Left Turn Lane											
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	2	9	15	1	2	9	15	9
Number of Detectors	1	2		Thru	Left	Thru	Right				
Detector Template	20	100	100	20	100	20	100	20	100	20	100
Leading Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	20	6	6	6	6	6	20	6	20	6	6
Detector 1 Size(ft)	6	6	6	6	6	6	6	6	6	6	6
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94			94		94		
Detector 2 Size(ft)	6			6			6		6		
Detector 2 Type	CI+EX			CI+EX			CI+EX		CI+EX		
Detector 2 Channel											
Detector 2 Extend (s)	0.0			0.0			0.0		0.0		
Turn Type	pn+pt			custom			custom		Perm		
Protected Phases	1	6		2			3		3		
Permitted Phases	6			3			3		3		
Detector Phase	1	6		2			3		3		

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
12: Sheridan Drive & I-290 NB

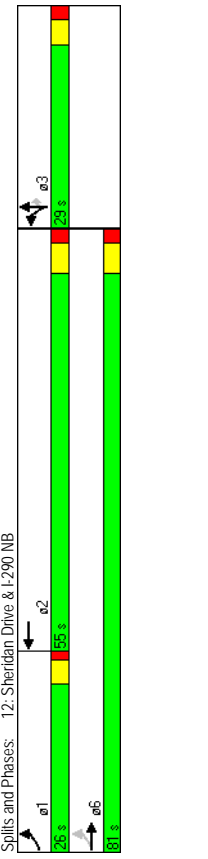
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	1.0	4.0		4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	6.2	33.9		27.8		29.0	29.0	29.0	29.0	29.0	29.0
Total Split (s)	26.0	81.0	0.0	55.0	0.0	29.0	29.0	29.0	29.0	0.0	0.0
Total Split (%)	23.6%	73.6%	0.0%	50.0%	0.0%	26.4%	26.4%	26.4%	26.4%	0.0%	0.0%
Maximum Green (s)	21.7	75.1		49.2		23.8	23.8	23.8	23.8		
Yellow Time (s)	3.2	3.9		3.9		3.2	3.2	3.2	3.2		
All-Red Time (s)	1.1	2.0		1.9		2.0	2.0	2.0	2.0		
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.3	5.9	4.0	5.8	4.0	5.2	5.2	5.2	5.2	4.0	4.0
Lead/Lag	Lead		Lag								
Vehicle Extension (s)	2.0	3.0		3.0		2.0	2.0	2.0	2.0		
Recall Mode	None	C-Max		C-Max		None	None	None	None		
Walk Time (s)	7.0		7.0			7.0					
Flash Dont Walk (s)	21.0		15.0			0					
Pedestrian Calls (#/hr)	0		0			0					
Act Effct Green (s)	82.1	80.5		61.4		18.4	18.4	18.4	18.4		
Actuated g/C Ratio	0.75	0.73		0.56		0.17	0.17	0.17	0.17		
v/c Ratio	0.82	0.44		0.64		0.76	0.72	0.69	0.69		
Control Delay	39.3	3.9		7.3		60.7	48.4	46.0	46.0		
Queue Delay	0.0	0.0		0.0		0.0	0.0	0.0	0.0		
Total Delay	39.3	3.9		7.3		60.7	48.4	46.0	46.0		
LOS	D	A		A		E	D	D	D		
Approach Delay	8.8		7.3			5.9					
Approach LOS	A		A			A					

Intersection Summary

Area Type:	Other
Cycle Length:	110
Actuated Cycle Length:	110
Offset:	7 (6%) Referenced to phase 2:WBT and 6:EBTL Start of Green
Natural Cycle:	80
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.82
Intersection Signal Delay:	14.4
Intersection Capacity Utilization:	70.5%
Analysis Period (min):	15

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
13: Sheridan Drive & Harlem Road

4/24/2014

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔↔	↔↔	↔↔	↔↔	↔↔
Volume (vph)	908	315	521	868	285	898
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	215	0	140	0	0
Storage Lanes	1	1	2	2	2	2
Taper Length (ft)	230	100	100	100	25	25
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	0.88
Flt Protected	0.850					0.850
Satd. Flow (prot)	3539	1583	3433	3539	3433	2787
Flt Permitted	0.950					0.950
Satd. Flow (perm)	3539	1583	3433	3539	3433	2787
Right Turn on Red	No					Yes
Satd. Flow (RTOR)	45					107
Link Speed (mph)	45					35
Link Distance (ft)	314					413
Travel Time (s)	4.8					6.3
Peak Hour Factor	0.85	0.85	0.92	0.92	0.90	0.90
Adj. Flow (vph)	1068	371	566	943	317	998
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1068	371	566	943	317	998
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Right	Right
Median Width(ft)	12		24	24	24	24
Link Offset(ft)	0		0	0	0	0
Crosswalk Width(ft)	16		16	16	16	16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15	15	15	15	9
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (ft)	100	20	20	100	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	6	20	20	6	20	20
Detector 1 Type	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Ch+Ex			Ch+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type		pm+ov	Prot			pm+ov
Protected Phases	2	3	1	6	3	1
Permitted Phases	2	3	1	6	3	1
Detector Phase	2	3	1	6	3	1

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
13: Sheridan Drive & Harlem Road

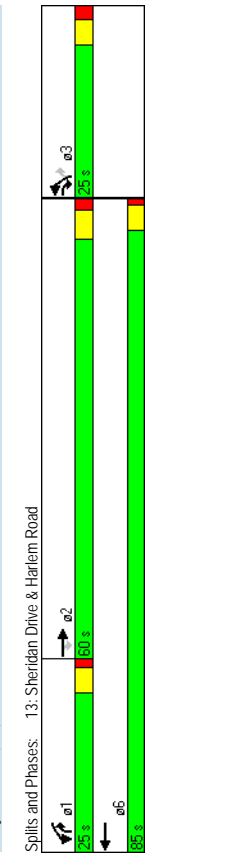
4/24/2014

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Switch Phase	→	↔	↔	↔	↔	↔
Minimum Initial (s)	1.0	1.0	1.0	4.0	1.0	1.0
Minimum Split (s)	30.5	6.2	5.3	32.3	6.2	5.3
Total Split (s)	60.0	25.0	25.0	85.0	25.0	25.0
Total Split (%)	54.5%	22.7%	22.7%	77.3%	22.7%	22.7%
Maximum Green (s)	54.5	19.8	20.7	80.7	19.8	20.7
Yellow Time (s)	3.9	3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.6	2.0	1.1	1.1	2.0	1.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.2	4.3	4.3	5.2	4.3
Lead/Lag	Lag	Lead	Lead	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	C-Max	None	None	None	None	None
Walk Time (s)	7.0			7.0		
Flash Dont Walk (s)	18.0			21.0		
Pedestrian Calls (#/hr)	0			0		
Act Effct Green (s)	56.9	76.9	23.6	86.0	14.5	43.3
Actuated g/C Ratio	0.52	0.70	0.21	0.78	0.13	0.39
v/c Ratio	0.58	0.34	0.77	0.34	0.70	0.86
Control Delay	20.5	7.5	57.1	3.5	54.1	35.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.5	7.5	57.1	3.5	54.1	35.5
LOS	C	A	E	A	D	D
Approach Delay	17.1			23.6	40.0	
Approach LOS	B			C	D	

Intersection Summary

Area Type:	Other
Cycle Length:	110
Actuated Cycle Length:	110
Offset:	7 (6%) Referenced to phase 2:EBT, Start of Green
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.86
Intersection Signal Delay:	26.5
Intersection Capacity Utilization:	64.7%
Analysis Period (min):	15
Intersection LOS:	C
ICU Level of Service:	C

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
14: I-290 SB & Harlem Road

4/24/2014

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (vph)	298	744	478	21	413	391
Ideal Flow (vppf)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	0	0	330	0
Storage Lanes	1	1	0	0	1	0
Taper Length (ft)	25	25	25	25	75	25
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	3518	0	1770	3539
Flt Permitted	0.950				0.215	
Satd. Flow (perm)	1770	1583	3518	0	400	3539
Right Turn on Red	Yes	Yes	Yes	Yes	Yes	Yes
Satd. Flow (RTOR)	146	4				
Link Speed (mph)	30	35				35
Link Distance (ft)	333	250				456
Travel Time (s)	7.6	4.9				8.9
Peak Hour Factor	0.81	0.81	0.87	0.87	0.88	0.88
Adj. Flow (vph)	368	919	549	24	469	444
Shared Lane Traffic (%)						
Lane Group Flow (vph)	368	919	573	0	469	444
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width (ft)	12	12			12	12
Link Offset (ft)	0	0			0	0
Crosswalk Width (ft)	16	16			16	16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9			9	15
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (ft)	20	20	100		20	100
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position (ft)	0	0	0		0	0
Detector 1 Size (ft)	20	20	6		20	6
Detector 1 Type	CI+EX	CI+EX	CI+EX		CI+EX	CI+EX
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position (ft)			94			94
Detector 2 Size (ft)			6			6
Detector 2 Type			CI+EX			CI+EX
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type		pm+ov				pm+pl
Protected Phases	3	1	2		1	6
Permitted Phases	3	1	2		6	6
Detector Phase	3	1	2		1	6

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
14: I-290 SB & Harlem Road

4/24/2014

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	22.0	9.2	30.6		9.2	21.0
Total Split (s)	40.0	35.0	50.0		35.0	85.0
Total Split (%)	32.0%	28.0%	40.0%		28.0%	68.0%
Maximum Green (s)	35.2	30.7	45.0		30.7	80.0
Yellow Time (s)	3.2	3.2	3.6		3.2	3.6
All-Red Time (s)	1.6	1.1	1.4		1.1	1.4
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.8	4.3	5.0		4.3	5.0
Lead/Lag		Lead	Lag		Lead	
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	Min		None	None
Walk Time (s)			10.0			
Flash Dont Walk (s)			15.0			
Pedestrian Calls (#/hr)			0			
Act Effct Green (s)	23.7	57.9	20.8		55.2	54.5
Actuated g/C Ratio	0.27	0.66	0.24		0.63	0.62
v/c Ratio	0.77	0.84	0.69		0.67	0.20
Control Delay	42.7	19.6	36.2		19.1	8.4
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	42.7	19.6	36.2		19.1	8.4
LOS	D	B	D		B	A
Approach Delay	26.2		36.2			13.9
Approach LOS	C		D			B

Intersection Summary

Area Type: Other

Cycle Length: 125

Actuated Cycle Length: 88.3

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

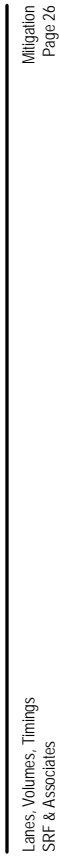
Maximum v/c Ratio: 0.84

Intersection Signal Delay: 24.2

Intersection Capacity Utilization 67.7%

Analysis Period (min) 15

Spills and Phases: 14: I-290 SB & Harlem Road



Lanes, Volumes, Timings
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
15: Maple Road & Proposed North Driveway

4/24/2014

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔↔	↔↔	↔↔	↔↔
Volume (vph)	977	61	113	1007	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900
Storage Length (ft)	0	225	0	150	0
Storage Lanes	0	1	1	1	1
Taper Length (ft)	25	25	25	25	25
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00
Flt	0.991				0.850
Flt Protected		0.950		0.950	
Satd. Flow (prot)	3507	0	1770	3539	1770
Flt Permitted		0.160		0.950	
Satd. Flow (perm)	3507	0	298	3539	1770
Right Turn on Red	Yes				Yes
Satd. Flow (RTOR)	13				40
Link Speed (mph)	45		45		30
Link Distance (ft)	1002		926		372
Travel Time (s)	15.2		14.0		8.5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1062	66	123	1095	72
Shared Lane Traffic (%)					116
Lane Group Flow (vph)	1128	0	123	1095	72
Enter Blocked Intersection	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Right
Median Width(ft)	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0
Crosswalk Width(ft)	16		16		16
Two way Left Turn Lane	Yes		Yes		Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15	15	15	9
Number of Detectors	2	1	2	1	1
Detector Template	Thru	Left	Thru	Left	Right
Leading Detector (ft)	100	20	100	20	20
Trailing Detector (ft)	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0
Detector 1 Size(ft)	6	20	6	20	20
Detector 1 Type	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 1 Channel					
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94		94		
Detector 2 Size(ft)	6		6		
Detector 2 Type	Ch+Ex		Ch+Ex		
Detector 2 Channel					
Detector 2 Extend (s)	0.0		0.0		
Turn Type		pm+pl			pm+ov
Protected Phases	4	3	8	2	3
Permitted Phases		8			2
Detector Phase	4	3	8	2	3

Lanes, Volumes, Timings
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
15: Maple Road & Proposed North Driveway

4/24/2014

Lane Group	EBT	WBL	WBT	NBL	NBR
Switch Phase	↔	↔	↔	↔	↔
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	8.0	20.0	20.0	8.0
Total Split (s)	30.0	0.0	40.0	20.0	10.0
Total Split (%)	50.0%	0.0%	66.7%	33.3%	16.7%
Maximum Green (s)	26.0	6.0	36.0	16.0	6.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lead	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	Min	None
Walk Time (s)	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0
Act Effct Green (s)	21.0	28.3	28.3	7.7	18.3
Actuated g/C Ratio	0.47	0.63	0.63	0.17	0.41
v/c Ratio	0.68	0.31	0.49	0.24	0.17
Control Delay	12.1	5.0	4.9	20.9	8.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	12.1	5.0	4.9	20.9	8.9
LOS	B	A	A	C	A
Approach Delay	12.1	4.9	13.5		
Approach LOS	B	A	B		

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 44.6

Natural Cycle: 55

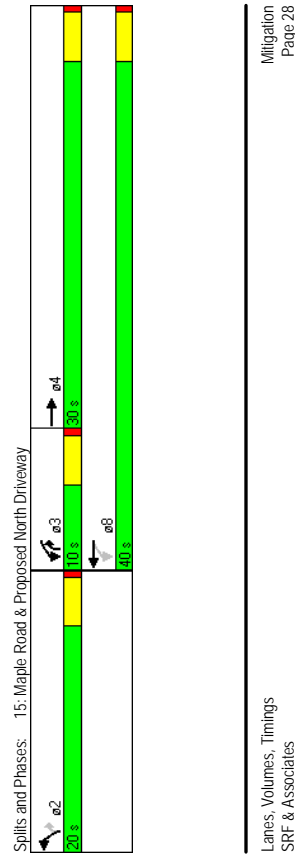
Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.68

Intersection Signal Delay: 8.7

Intersection Capacity Utilization: 48.9%

Analysis Period (min): 15



Lanes, Volumes, Timings
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
 16: Sheridan Drive & Proposed Ltd Access Driveway

4/24/2014



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (veh/h)	27	1683	1611	47	0	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200	425	0	0	0	0
Storage Lanes	1	1	0	1	0	1
Taper Length (ft)	25	0.95	0.95	1.00	1.00	1.00
Lane Util. Factor	1.00	0.850	0.850	0.865		
Flt Protected	0.950					
Satd. Flow (prot)	1770	3539	3539	1583	0	1611
Flt Permitted	0.950					
Satd. Flow (perm)	1770	3539	3539	1583	0	1611
Link Speed (mph)	45	45	45	30		
Link Distance (ft)	699	969	969	220		
Travel Time (s)	10.6	14.7	14.7	5.0		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	29	1829	1751	51	0	25
Shared Lane Traffic (%)						
Lane Group Flow (vph)	29	1829	1751	51	0	25
Enter Blocked Intersection	No	Yes	No	No	No	No
Lane Alignment	Left	Left	Right	Right	Left	Right
Median Width(ft)	12	12	12	0		
Link Offset(ft)	0	0	0	0		
Crosswalk Width(ft)	16	16	16	16		
Two way Left Turn Lane	Yes	Yes	Yes	Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	Free	Free	Free	Stop	Stop
Sign Control	Free	Free	Free	Free	Stop	Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	54.5%					
Analysis Period (min)	15					
ICU Level of Service:	A					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
 16: Sheridan Drive & Proposed Ltd Access Driveway

4/24/2014



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (veh/h)	27	1683	1611	47	0	23
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	29	1829	1751	51	0	25
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL TWLTL					
Median storage (veh)	2	2	2	2		
Upstream signal (ft)	699	969	969	220		
pX, platoon unblocked	0.71			0.84	0.71	
vC, conflicting volume	1802			2724	876	
vC1, stage 1 conf vol				1751		
vC2, stage 2 conf vol				973		
vCu, unblocked vol	1311			1125	4	
IC, single (s)	4.1			6.8	6.9	
IC, 2 stage (s)				5.8		
IF (s)	2.2			3.5	3.3	
p0 queue free %	92			100	97	
cM capacity (veh/h)	371			164	764	
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3
Volume Total	29	915	915	876	876	51
Volume Left	29	0	0	0	0	0
Volume Right	0	0	0	0	0	51
cSH	371	1700	1700	1700	1700	764
Volume to Capacity	0.08	0.54	0.54	0.52	0.52	0.03
Queue Length 95th (ft)	6	0	0	0	0	0
Control Delay (s)	15.5	0.0	0.0	0.0	0.0	9.9
Lane LOS	C					A
Approach Delay (s)	0.2			0.0		9.9
Approach LOS				A		A
Intersection Summary						
Average Delay	0.2					
Intersection Capacity Utilization	54.5%					
ICU Level of Service	A					
Analysis Period (min)	15					

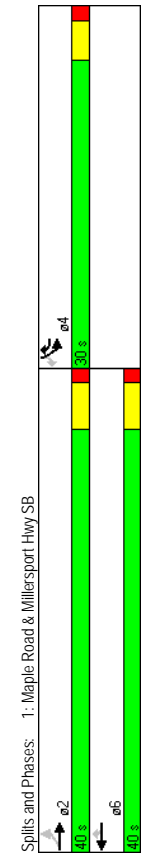
Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
1: Maple Road & Millersport Hwy SB
4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (vph)	29	989	909	229	60	174
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	0	0	0	0	0
Storage Lanes	1	1	1	1	1	1
Taper Length (ft)	35	100	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00
Flt Protected	0.950			0.850	0.950	
Satd. Flow (prot)	1770	3539	3539	1583	1770	1583
Flt Permitted	0.268			0.950		
Satd. Flow (perm)	499	3539	3539	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)		45	45		30	78
Link Speed (mph)		555	654		281	
Link Distance (ft)		8.4	9.9		6.4	
Travel Time (s)		0.90	0.92	0.92	0.81	0.81
Peak Hour Factor		32	1099	988	249	74
Adj. Flow (vph)		32	1099	988	249	74
Shared Lane Traffic (%)						
Lane Group Flow (vph)	No	No	No	No	No	No
Enter Blocked Intersection	Left	Left	Right	Left	Right	Right
Lane Alignment	Left	Left	Right	Left	Right	Right
Median Width(ft)	0	0	0	0	0	0
Link Offset(ft)	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16
Two way Left Turn Lane		Yes				
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	2	2	9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94	94	94			
Detector 2 Size(ft)	6	6	6			
Detector 2 Type	Ch+Ex	Ch+Ex	Ch+Ex			
Detector 2 Channel						
Detector 2 Extend (s)	0.0	0.0	0.0			
Turn Type	Perm			pm+ov		Perm
Protected Phases		2	6	4	4	
Permitted Phases	2	2	6	6	4	4
Detector Phase	2	2	6	4	4	4

Lanes, Volumes, Timings
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
1: Maple Road & Millersport Hwy SB
4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	1.0	1.0	1.0
Minimum Split (s)	9.1	9.1	9.1	6.2	6.2	6.2
Total Split (s)	40.0	40.0	40.0	30.0	30.0	30.0
Total Split (%)	57.1%	57.1%	57.1%	42.9%	42.9%	42.9%
Maximum Green (s)	34.9	34.9	34.9	25.4	25.4	25.4
Yellow Time (s)	3.9	3.9	3.9	3.2	3.2	3.2
All-Red Time (s)	1.2	1.2	1.2	1.4	1.4	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	4.6	4.6	4.6
Lead-Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Min	C-Min	C-Min	None	None	None
Act Effct Green (s)	48.4	48.4	48.4	70.0	70.0	70.0
Actuated g/C Ratio	0.69	0.69	0.69	1.00	0.17	0.17
v/c Ratio	0.09	0.45	0.40	0.16	0.25	0.64
Control Delay	5.9	6.3	2.3	0.1	25.0	25.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.9	6.3	2.3	0.1	25.0	25.1
LOS	A	A	A	A	C	C
Approach Delay		6.3	1.8		25.0	
Approach LOS		A	A		C	
Intersection Summary						
Area Type:	Other					
Cycle Length:	70					
Offset:	17 (24%), Referenced to phase 2:EBTL and 6:WBT. Start of Green					
Natural Cycle:	40					
Control Type:	Actuated-Coordinated					
Maximum v/c Ratio:	0.64					
Intersection Signal Delay:	6.3					
Intersection Capacity Utilization:	44.0%					
Analysis Period (min):	15					



Splits and Phases: 1: Maple Road & Millersport Hwy SB
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
2: Maple Road & Millersport Hwy NB

4/24/2014

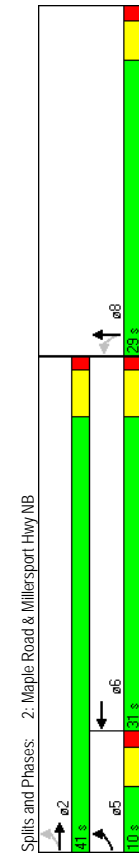
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	97	952	0	0	1046	31	91	0	466	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	0	0	0	0	0	0	0	0	0
Storage Lanes	1	0	0	0	0	1	0	0	0	0	0
Taper Length (ft)	50	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.950				0.996		0.950		0.850		
Satd. Flow (prot)	1770	3539	0	0	3525	0	1770	1583	0	0	0
Flt Permitted	0.124				0.950		0.950				
Satd. Flow (perm)	231	3539	0	0	3525	0	1770	1583	0	0	0
Right Turn on Red		Yes			Yes		Yes		Yes		Yes
Satd. Flow (RTOR)		45			5		72				30
Link Speed (mph)		654			1770		319		263		263
Link Distance (ft)		9.9			26.8		7.3		6.0		6.0
Travel Time (s)		0.91			0.87		0.84		0.84		0.92
Peak Hour Factor		107			1046		108		555		0
Adj. Flow (vph)		107			1046		108		555		0
Shared Lane Traffic (%)		107			1046		108		555		0
Lane Group Flow (vph)	No	No	No	No	No	No	No	No	No	No	No
Enter Blocked Intersection	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Median Width (ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset (ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width (ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	15	9	15	15	9	15	15	9
Number of Detectors	1	2	2	2	2	2	1	2	2	2	2
Detector Template	Left	Thru	Thru	Thru	Thru	Thru	Left	Thru	Thru	Thru	Thru
Leading Detector (ft)	20	100	100	100	100	100	20	100	100	100	100
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size (ft)	20	6	6	6	6	6	20	6	6	6	6
Detector 1 Type	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position (ft)	94	94	94	94	94	94	94	94	94	94	94
Detector 2 Size (ft)	6	6	6	6	6	6	6	6	6	6	6
Detector 2 Type	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 2 Channel											
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	pm+pt						Perm				
Protected Phases	5	2	6	6	6	6	8	8	8	8	8
Permitted Phases	2	2	6	6	6	6	8	8	8	8	8
Detector Phase	5	2	6	6	6	6	8	8	8	8	8

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
2: Maple Road & Millersport Hwy NB

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	4.0	1.0	4.0	4.0	4.0	4.0	1.0	1.0	4.0	4.0	4.0
Minimum Split (s)	8.6	6.1	8.6	9.1	9.1	9.1	6.2	6.2	8.6	8.6	8.6
Total Split (s)	10.0	41.0	0.0	0.0	31.0	0.0	29.0	29.0	0.0	0.0	0.0
Total Split (%)	14.3%	58.6%	0.0%	0.0%	44.3%	0.0%	41.4%	41.4%	0.0%	0.0%	0.0%
Maximum Green (s)	5.4	35.9	25.9	25.9	25.9	25.9	24.4	24.4	5.4	5.4	5.4
Yellow Time (s)	3.2	3.9	3.9	3.9	3.9	3.9	3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.4	1.2	1.2	1.2	1.2	1.2	1.4	1.4	1.4	1.4	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.1	4.0	4.0	5.1	4.0	4.6	4.6	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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
Recall Mode	None	C-Min	C-Min	C-Min	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	37.0	36.5	28.5	28.5	28.5	28.5	23.8	23.8	37.0	37.0	37.0
Actuated g/C Ratio	0.53	0.52	0.41	0.41	0.41	0.41	0.34	0.34	0.53	0.53	0.53
v/c Ratio	0.44	0.57	0.86	0.86	0.86	0.86	0.18	0.18	0.44	0.44	0.44
Control Delay	19.4	10.9	28.5	28.5	28.5	28.5	16.9	16.9	19.4	19.4	19.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.4	10.9	28.5	28.5	28.5	28.5	16.9	16.9	19.4	19.4	19.4
LOS	B	B	B	B	B	B	C	C	B	B	B
Approach Delay	B	B	B	B	B	B	C	C	B	B	B
Approach LOS	B	B	B	B	B	B	C	C	B	B	B
Intersection Summary	Other										
Area Type:	Other										
Cycle Length:	70										
Actuated Cycle Length:	70										
Offset:	5 (7%) Referenced to phase 2:EBTL and 6:WBT. Start of Green										
Natural Cycle:	80										
Control Type:	Actuated-Coordinated										
Maximum v/c Ratio:	0.95										
Intersection Signal Delay:	25.3										
Intersection LOS:	C										
Intersection Capacity Utilization:	76.0%										
Analysis Period (min):	15										



Splits and Phases: 2: Maple Road & Millersport Hwy NB

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
3: Maple Road & Maplemere Road

4/24/2014

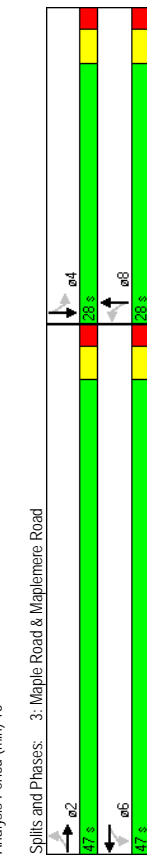
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	36	1280	35	21	967	62	22	0	12	77	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	70	0	0	0	0	0	0	0	0
Storage Lanes	1	0	1	0	0	0	0	0	0	0	0
Taper Length (ft)	50	25	50	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Fit	0.996	0.950	0.991	0.952	0.964	0.968	0.969	0.968	0.968	0.964	0.964
Satd. Flow (prot)	1770	3525	0	1770	3507	0	1718	0	1718	0	1738
Flt Permitted	0.205	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147
Right Turn on Red	382	3525	0	274	3507	0	1392	0	1377	0	1377
Satd. Flow (RTOR)	6	Yes	14	Yes	19	Yes	25	Yes	25	Yes	25
Link Speed (mph)	45	45	45	45	45	45	45	45	45	45	45
Link Distance (ft)	26.8	1106	16.8	1106	378	1106	402	1106	378	1106	402
Travel Time (s)	0.94	0.94	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Peak Hour Factor	38	1362	37	24	1111	71	35	0	19	95	10
Adj. Flow (vph)	38	1399	0	24	1182	0	54	0	19	95	10
Lane Group Flow (vph)	No	No	No	No	No	No	No	No	No	No	No
Enter Blocked Intersection	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Median Width (ft)	12	0	12	0	0	0	0	0	0	0	0
Link Offset (ft)	16	0	16	0	16	0	16	0	16	0	16
Crosswalk Width (ft)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9	15	9	15	9	15
Number of Detectors	1	2	1	2	1	2	1	2	1	2	1
Detector Template	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left
Leading Detector (ft)	20	100	20	100	20	100	20	100	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size (ft)	20	6	20	6	20	6	20	6	20	6	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position (ft)	94	0	94	0	94	0	94	0	94	0	94
Detector 2 Size (ft)	6	6	6	6	6	6	6	6	6	6	6
Detector 2 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 2 Channel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Extend (s)	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm
Turn Type	2	2	6	6	6	6	8	8	8	8	4
Permitted Phases	2	2	6	6	6	6	8	8	8	8	4
Detector Phase	2	2	6	6	6	6	8	8	8	8	4

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
3: Maple Road & Maplemere Road

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	9.0	9.0	9.0	9.0	9.0	27.0	27.0	27.0	27.0	27.0
Total Split (s)	47.0	47.0	0.0	47.0	47.0	0.0	28.0	28.0	0.0	28.0	28.0
Total Split (%)	62.7%	62.7%	0.0%	62.7%	62.7%	0.0%	37.3%	37.3%	0.0%	37.3%	37.3%
Maximum Green (s)	42.0	42.0	42.0	42.0	42.0	42.0	23.0	23.0	0.0	23.0	23.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Lead-Lag Optimize?											
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	None	None	None	None	None
Recall Mode	Min	Min	Min	Min	Min	Min	None	None	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	15.0	15.0	15.0	15.0	15.0
Flash Dont Walk (s)	15.0	15.0	15.0	15.0	15.0	15.0	0	0	0	0	0
Pedestrian Calls (#/hr)											
Act Effct Green (s)	34.6	34.6	34.6	34.6	34.6	34.6	9.7	9.7	0	0	10.3
Actuated g/C Ratio	0.68	0.68	0.68	0.68	0.68	0.68	0.19	0.19	0	0	0.20
v/c Ratio	0.15	0.58	0.13	0.49	0.13	0.49	0.19	0.19	0	0	0.48
Control Delay	6.9	7.7	7.3	6.7	7.3	6.7	15.6	15.6	0.0	0.0	22.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.9	7.7	7.3	6.7	7.3	6.7	15.6	15.6	0.0	0.0	22.7
LOS	A	A	A	A	A	A	B	B	B	B	C
Approach Delay	7.7	7.7	7.7	6.7	6.7	6.7	15.6	15.6	15.6	22.7	22.7
Approach LOS	A	A	A	A	A	A	B	B	B	B	C
Intersection Summary	Other										
Area Type:	Other										
Cycle Length:	75										
Actuated Cycle Length:	50.7										
Natural Cycle:	60										
Control Type:	Actuated-Uncoordinated										
Maximum v/c Ratio:	0.58										
Intersection Signal Delay:	8.2										
Intersection Capacity Utilization:	52.6%										
Analysis Period (min):	15										



Spills and Phases: 3: Maple Road & Maplemere Road
e2 47 s
e4 28 s
e6 28 s
e8 28 s

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
4: Maple Road & Donna Lea Blvd

4/24/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕↕	↕↕	↕↕	↕↕	↕↕	↕↕
Volume (vph)	1340	29	23	1038	12	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	50	0	0	0	0
Storage Lanes	0	1	0	1	0	0
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Flt Protected	0.997		0.950	0.982		0.982
Satd. Flow (prot)	3529	0	1770	3539	1672	0
Flt Permitted	0.950		0.950	0.982		0.982
Satd. Flow (perm)	3529	0	1770	3539	1672	0
Link Speed (mph)	45		45	30		30
Link Distance (ft)	1106		1000	355		355
Travel Time (s)	16.8		15.2	8.1		8.1
Adj. Flow (vph)	1836	40	30	1348	15	26
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1876	0	30	1348	41	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12		12	12		12
Link Offset(ft)	0		0	0		0
Crosswalk Width(ft)	16		16	16		16
Two way Left Turn Lane	Yes		Yes			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15	15	15	15	9
Sign Control	Free	Free	Free	Free	Stop	Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	48.0%					
Analysis Period (min)	15					
ICU Level of Service: A						

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
4: Maple Road & Donna Lea Blvd

4/24/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕↕	↕↕	↕↕	↕↕	↕↕	↕↕
Volume (veh/h)	1340	29	23	1038	12	21
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%		0%	0%		0%
Peak Hour Factor	0.73	0.73	0.77	0.77	0.82	0.82
Hourly flow rate (vph)	1836	40	30	1348	15	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLT		TWLT			
Median storage (veh)	2		2			
Upstream signal (ft)	1106		1000			
pX, platoon unblocked		0.75		0.80		0.75
vC, conflicting volume		1875		2589		938
vC1, stage 1 conf vol				1855		
vC2, stage 2 conf vol				734		
vCu, unblocked vol		1499		1869		247
IC, single (s)		4.1		6.8		6.9
IC, 2 stage (s)				5.8		
IF (s)		2.2		3.5		3.3
p0 queue free %		91		88		95
cM capacity (veh/h)		332		127		564
Direction, Lane #						
	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	1224	652	30	674	674	40
Volume Left	0	0	30	0	0	15
Volume Right	0	40	0	0	0	26
cSH	1700	1700	332	1700	1700	251
Volume to Capacity	0.72	0.38	0.09	0.40	0.40	0.16
Queue Length 95th (ft)	0	0	7	0	0	14
Control Delay (s)	0.0	0.0	16.9	0.0	0.0	22.1
Lane LOS			C			C
Approach Delay (s)	0.0	0.4				22.1
Approach LOS						C
Intersection Summary						
Average Delay	0.4					
Intersection Capacity Utilization	48.0%					
Analysis Period (min)	15					
ICU Level of Service: A						

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
5: Maple Road & Audubon Golf Club

4/24/2014



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	0	1437	14	8	1095	2	10	0	0	6	0
Volume (vph)	0	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vpph)	100	0	50	0	0	0	0	0	0	0	0
Storage Length (ft)	1	0	1	0	0	0	0	0	0	0	0
Storage Lanes	25	25	25	25	25	25	25	25	25	25	25
Taper Length (ft)	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.999						0.948				
Flt Protected		0.950					0.970				
Satd. Flow (prot)	1863	3536	0	1770	3539	0	1713	0	0	1863	0
Flt Permitted		0.950					0.970				
Satd. Flow (perm)	1863	3536	0	1770	3539	0	1713	0	0	1863	0
Link Speed (mph)	45	45	45	45	45	45	30	30	30	30	30
Link Distance (ft)	446	446	446	446	446	446	469	469	469	469	111
Travel Time (s)	6.8	6.8	8.4	8.4	8.4	8.4	10.7	10.7	10.7	10.7	2.5
Peak Hour Factor	0.92	0.92	0.92	0.93	0.93	0.93	0.61	0.61	0.61	0.92	0.92
Adj. Flow (vph)	0	1562	15	9	1177	2	16	0	10	0	0
Shared Lane Traffic (%)											
Lane Group Flow (vph)	0	1577	0	9	1179	0	0	26	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Right
Median Width (ft)	12	12	12	12	12	12	0	0	0	0	0
Link Offset (ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width (ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	15	15	15	15	15	15	15	15	15	15
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop

Intersection Summary											
Area Type:	Other										
Control Type:	Unsignalized										
Intersection Capacity Utilization	50.2%										
Analysis Period (min)	15										
ICU Level of Service:	A										

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
5: Maple Road & Audubon Golf Club

4/24/2014



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	0	1437	14	8	1095	2	10	0	0	6	0
Volume (veh/h)	0	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.93	0.93	0.93	0.61	0.61	0.61	0.92	0.92
Hourly flow rate (vph)	0	1562	15	9	1177	2	16	0	10	0	0
Pedestrians											
Lane Width (ft)											
Walking Speed (ft/s)											
Percent Blockage											
Right turn flare (veh)											
Median type							TWLT				
Median storage (veh)							2				
Upstream signal (ft)											
pX, platoon unblocked											
vC, conflicting volume	1180		1577			2175	2766		789	1987	2773
vC1, stage 1 conf vol						1570	1570		1196	1196	1196
vC2, stage 2 conf vol						606	1197		791	1577	1577
vCu, unblocked vol	1180		1577			2175	2766		789	1987	2773
IC, single (s)	4.1		4.1			7.5	6.5		6.9	7.5	6.5
IC, 2 stage (s)						6.5	5.5		6.5	5.5	5.5
IF (s)	2.2		2.2			3.5	4.0		3.3	3.5	4.0
p0 queue free %	100		98			85	100		97	100	100
cM capacity (veh/h)	588		413			110	136		334	164	451

Direction, Lane #											
EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1				
0	1041	536	9	785	395	26	0				
Volume Total	0	0	0	0	0	0	0				
Volume Left	0	0	15	0	0	2	10				
cSH	1700	1700	1700	413	1700	1700	146	1700			
Volume to Capacity	0.00	0.61	0.32	0.02	0.46	0.23	0.18	0.00			
Queue Length 95th (ft)	0	0	0	2	0	0	16	0			
Control Delay (s)	0.0	0.0	0.0	13.9	0.0	0.0	34.9	0.0			
Lane LOS				B		D	A				
Approach Delay (s)	0.0		0.1			34.9	0.0				
Approach LOS						D	A				

Intersection Summary		
Average Delay	0.4	
Intersection Capacity Utilization	50.2%	
Analysis Period (min)	15	
ICU Level of Service	A	

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
6: Maple Road & North Forest Road

4/24/2014

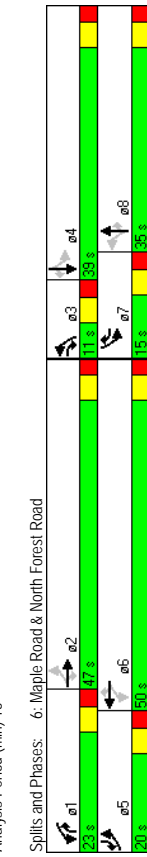
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	216	1093	145	239	817	96	96	359	208	169	390
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	415	220	220	315	220	150	125	220	250	250	250
Storage Lanes	1	1	1	1	1	1	1	1	1	1	1
Taper Length (ft)	90	115	60	60	25	25	95	25	25	90	25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.950			0.950			0.950			0.950	0.850
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1863	1583	1770	1863
Flt Permitted	0.183			0.090			0.155			0.160	
Satd. Flow (perm)	341	3539	1583	168	3539	1583	289	1863	1583	298	1863
Right Turn on Red	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes	Yes	Yes
Satd. Flow (RTOR)		131					23				58
Link Speed (mph)	45			45			35			35	
Link Distance (ft)	1705			820			529			608	
Travel Time (s)	25.8			12.4			10.3			11.8	
Peak Hour Factor	0.92	0.92	0.92	0.90	0.90	0.90	0.96	0.96	0.96	0.87	0.87
Adj. Flow (vph)	235	1188	158	266	908	107	100	374	217	194	448
Shared Lane Traffic (%)											
Lane Group Flow (vph)	235	1188	158	266	908	107	100	374	217	194	448
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Left	Right	Left	Right
Median Width (ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset (ft)	0			0			0			0	
Crosswalk Width (ft)	16			16			16			16	
Two way Left Turn Lane	Yes										
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	2	1	2	1	2	1	1	2
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru
Leading Detector (ft)	20	100	20	100	20	100	20	100	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size (ft)	20	6	20	20	6	20	20	6	20	20	6
Detector 1 Type	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position (ft)	94			94			94			94	
Detector 2 Size (ft)	6			6			6			6	
Detector 2 Type	Ch+Ex			Ch+Ex			Ch+Ex			Ch+Ex	
Detector 2 Channel											
Detector 2 Extend (s)	0.0			0.0			0.0			0.0	
Turn Type	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt
Protected Phases	5	2	3	1	6	7	3	8	1	7	4
Permitted Phases	2	2	2	6	6	6	8	8	4	4	4
Detector Phase	5	2	3	1	6	7	3	8	1	7	4

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
6: Maple Road & North Forest Road

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	1.0	4.0	1.0	1.0	4.0	1.0	1.0	4.0	1.0	1.0	4.0
Minimum Split (s)	7.0	35.0	7.0	7.0	35.0	7.0	7.0	35.0	7.0	7.0	35.0
Total Split (s)	20.0	47.0	11.0	23.0	50.0	15.0	11.0	35.0	23.0	15.0	39.0
Total Split (%)	16.7%	39.2%	9.2%	19.2%	41.7%	12.5%	9.2%	29.2%	19.2%	12.5%	32.5%
Maximum Green (s)	14.0	41.0	5.0	17.0	44.0	9.0	5.0	29.0	17.0	9.0	33.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lead	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Walk Time (s)	7.0			7.0			7.0			7.0	
Flash Dont Walk (s)	22.0			22.0			22.0			22.0	
Pedestrian Calls (#/hr)	0			0			0			0	
Act Effct Green (s)	53.9	41.1	52.1	60.0	44.1	59.2	31.7	26.7	48.5	39.7	30.7
Actuated g/C Ratio	0.46	0.35	0.45	0.51	0.38	0.51	0.27	0.23	0.42	0.34	0.26
v/c Ratio	0.75	0.95	0.20	0.88	0.68	0.13	0.70	0.88	0.32	0.90	0.91
Control Delay	33.4	54.4	5.9	58.5	34.1	16.8	55.4	65.9	21.6	71.0	66.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.4	54.4	5.9	58.5	34.1	16.8	55.4	65.9	21.6	71.0	66.6
LOS	C	D	A	E	C	B	E	E	C	E	B
Approach Delay	46.5			37.7			50.5			56.9	
Approach LOS	D			D			D			E	
Intersection Summary	Other										
Area Type:	Other										
Cycle Length:	120										
Actuated Cycle Length:	116.7										
Natural Cycle:	95										
Control Type:	Actuated-Uncoordinated										
Maximum v/c Ratio:	0.95										
Intersection Signal Delay:	46.5										
Intersection Capacity Utilization:	91.7%										
Analysis Period (min):	15										



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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
7: Sheridan Drive & Mill Street

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	17	1411	26	121	1418	53	151	53	148	34	68
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	100	0	150	0	150	0	40	0	75	0	75
Storage Length (ft)	1	0	1	0	1	0	1	0	1	0	1
Storage Lanes	65	25	60	25	60	25	25	25	25	25	25
Taper Length (ft)	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.997		0.995		0.995		0.890		0.973		0.973
Flt Protected	0.950		0.950		0.950		0.950		0.950		0.950
Satd. Flow (prot)	1770	3529	0	1770	3522	0	1770	1658	0	1770	1812
Flt Permitted	0.097		0.054		0.559		0.559		0.608		0.608
Satd. Flow (perm)	181	3529	0	101	3522	0	1041	1658	0	1133	1812
Right Turn on Red		No			Yes			No			Yes
Satd. Flow (RTOR)					5						7
Link Speed (mph)	45			45			30		30		30
Link Distance (ft)	2782			977			838		362		362
Travel Time (s)	42.2			14.8			19.0		8.2		8.2
Peak Hour Factor	0.84	0.84	0.84	0.92	0.92	0.92	0.83	0.83	0.83	0.77	0.77
Adj. Flow (vph)	20	1660	31	132	1541	58	182	64	178	44	88
Shared Lane Traffic (%)											
Lane Group Flow (vph)	20	1711	0	132	1599	0	182	242	0	44	107
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Right	Right
Median Width(ft)	12			12			12		12		12
Link Offset(ft)	0			0			0		0		0
Crosswalk Width(ft)	16			16			16		16		16
Two way Left Turn Lane	Yes			Yes			Yes		Yes		Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9	15	9	15	9	15
Number of Detectors	1	2	1	2	1	2	1	2	1	2	1
Detector Template	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left
Leading Detector (ft)	20	100	20	100	20	100	20	100	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	6	20	6	20	6	20	6	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94		94		94		94		94		94
Detector 2 Size(ft)	6		6		6		6		6		6
Detector 2 Type	CI+EX		CI+EX		CI+EX		CI+EX		CI+EX		CI+EX
Detector 2 Channel											
Detector 2 Extend (s)	0.0		0.0		0.0		0.0		0.0		0.0
Turn Type	Perm		pm+pt		pm+pt		pm+pt		Perm		Perm
Protected Phases	2		1		6		3		8		4
Permitted Phases	2		6		6		8		4		4
Detector Phase	2		1		6		3		8		4

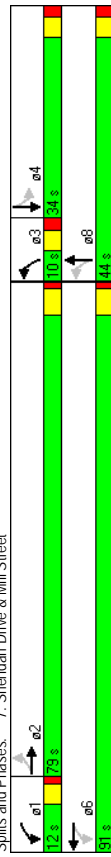
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
7: Sheridan Drive & Mill Street

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase	4.0	4.0		1.0	4.0		1.0	4.0		4.0	4.0
Minimum Initial (s)	28.3	28.3		6.2	28.3		6.2	34.2		34.2	34.2
Minimum Split (s)	79.0	79.0	0.0	12.0	91.0	0.0	10.0	44.0	0.0	34.0	34.0
Total Split (s)	58.5%	58.5%	0.0%	8.9%	67.4%	0.0%	7.4%	32.6%	0.0%	25.2%	25.2%
Total Split (%)	73.5	73.5		7.7	85.5		4.8	38.8		28.8	28.8
Maximum Green (s)	4.3	4.3		3.2	4.3		3.2	3.2		3.2	3.2
Yellow Time (s)	1.2	1.2		1.1	1.2		2.0	2.0		2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	5.5	5.5	4.0	4.3	5.5	4.0	5.2	5.2	4.0	5.2	5.2
Total Lost Time (s)	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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
Recall Mode	None	None	None	None	None	None	Max	Max	Max	Max	Max
Walk Time (s)	7.0	7.0		7.0			7.0		7.0		7.0
Flash Dont Walk (s)	15.0	15.0		15.0			22.0		22.0		22.0
Pedestrian Calls (#/hr)	0			0			0		0		0
Act Effct Green (s)	69.2	69.2		82.5	81.3		39.1	39.1		29.1	29.1
Actuated g/C Ratio	0.53	0.53		0.63	0.62		0.30	0.30		0.22	0.22
v/c Ratio	0.21	0.92		0.81	0.73		0.54	0.49		0.18	0.26
Control Delay	22.8	37.2		60.6	19.6		45.3	42.9		45.5	42.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0
Total Delay	22.8	37.2		60.6	19.6		45.3	42.9		45.5	42.6
LOS	C	D		E	B		D	D		D	D
Approach Delay	37.1			22.7			43.9			43.5	
Approach LOS	D			C			D			D	

Intersection Summary
Area Type: Other
Cycle Length: 135
Actuated Cycle Length: 131.1
Natural Cycle: 110
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.92
Intersection Signal Delay: 31.9
Intersection Capacity Utilization 78.6%
Analysis Period (min) 15



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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
8: Sheridan Drive & North Forest Road

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	156	1293	308	305	1220	41	304	468	82	24	496
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	405	170	260	0	180	0	180	265	180	200	200
Storage Lanes	1	1	1	0	1	0	1	1	1	1	1
Taper Length (ft)	200	1	25	200	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95
Flt Protected	0.950	0.850	0.950	0.950	0.950	0.950	0.950	0.850	0.850	0.950	0.850
Satd. Flow (prot)	1770	3539	1583	1770	3522	0	1770	1863	1583	1770	3539
Flt Permitted	0.073	0.070	0.070	0.184	0.184	0.184	0.184	0.184	0.184	0.173	0.173
Satd. Flow (perm)	136	3539	1583	130	3522	0	343	1863	1583	322	3539
Right Turn on Red	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Satd. Flow (RTOR)	41	41	41	2	2	2	69	69	69	222	222
Link Speed (mph)	45	45	45	45	45	45	40	40	40	35	35
Link Distance (ft)	969	969	969	2219	2219	2219	547	547	547	354	354
Travel Time (s)	14.7	14.7	14.7	33.6	33.6	33.6	9.3	9.3	9.3	6.9	6.9
Peak Hour Factor	0.94	0.94	0.94	0.93	0.93	0.93	0.89	0.89	0.89	0.95	0.95
Adj. Flow (vph)	166	1482	328	328	1312	44	342	526	92	25	522
Shared Lane Traffic (%)	166	1482	328	328	1356	0	342	526	92	25	522
Lane Group Flow (vph)	No	No	No	No	No	No	No	No	No	No	No
Enter Blocked Intersection	Left	Left	Right	Left	Right	Left	Left	Right	Left	Right	Right
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Right	Right
Median Width (ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset (ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width (ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	15	15	9	15	15	9	15	15
Number of Detectors	1	2	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru
Leading Detector (ft)	20	100	20	100	20	100	20	100	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size (ft)	20	6	20	20	6	20	6	20	6	20	6
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel	Detector 1 Channel	Detector 1 Channel	Detector 1 Channel	Detector 1 Channel	Detector 1 Channel	Detector 1 Channel	Detector 1 Channel	Detector 1 Channel	Detector 1 Channel	Detector 1 Channel	Detector 1 Channel
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position (ft)	94	94	94	94	94	94	94	94	94	94	94
Detector 2 Size (ft)	6	6	6	6	6	6	6	6	6	6	6
Detector 2 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 2 Channel	Detector 2 Channel	Detector 2 Channel	Detector 2 Channel	Detector 2 Channel	Detector 2 Channel	Detector 2 Channel	Detector 2 Channel	Detector 2 Channel	Detector 2 Channel	Detector 2 Channel	Detector 2 Channel
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	pm+pt	pm+ov	pm+pt	pm+pt	pm+pt	pm+pt	pm+pt	pm+pt	pm+pt	pm+pt	Perm
Protected Phases	1	6	7	5	2	7	4	3	8	8	8
Permitted Phases	6	6	6	2	2	4	4	4	8	8	8
Detector Phase	1	6	7	5	2	7	4	4	4	3	8

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
8: Sheridan Drive & North Forest Road

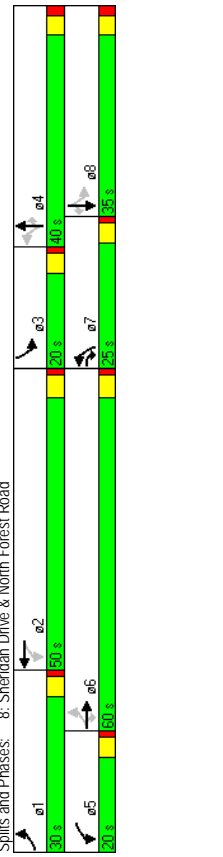
4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.3	27.9	21.0	8.3	27.9	21.0	27.2	27.2	27.2	8.3	27.2
Total Split (s)	30.0	60.0	25.0	20.0	50.0	0.0	25.0	40.0	40.0	20.0	35.0
Total Split (%)	21.4%	42.9%	17.9%	14.3%	35.7%	0.0%	17.9%	28.6%	28.6%	14.3%	25.0%
Maximum Green (s)	25.7	54.9	20.7	15.7	44.9	20.7	34.9	34.9	34.9	15.7	29.9
Yellow Time (s)	3.2	3.9	3.2	3.2	3.9	3.2	3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.1	1.2	1.1	1.1	1.2	1.1	1.1	1.1	1.1	1.1	1.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.3	5.1	4.3	4.3	5.1	4.0	4.3	5.1	5.1	4.3	5.1
Lead/Lag	Lead	Lead	Lead	Lead	Lead	Lead	Lead	Lead	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0	0	0	0
Act Effct Green (s)	69.2	54.9	80.8	72.7	57.1	51.4	43.8	43.8	43.8	33.2	25.6
Actuated g/C Ratio	0.51	0.40	0.59	0.54	0.42	0.38	0.32	0.32	0.24	0.19	0.19
v/c Ratio	0.72	1.03	0.34	1.27	0.91	0.98	0.88	0.88	0.17	0.17	0.46
Control Delay	46.4	73.1	13.8	180.7	48.3	78.9	61.1	61.1	12.8	29.8	61.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.4	73.1	13.8	180.7	48.3	78.9	61.1	61.1	12.8	29.8	61.3
LOS	D	E	B	F	D	E	E	E	B	C	A
Approach Delay	61.0	61.0	61.0	74.1	61.0	61.0	62.8	62.8	61.0	61.0	45.1
Approach LOS	E	E	E	E	E	E	E	E	E	E	D

Intersection Summary

Area Type:	Other
Cycle Length:	140
Actuated Cycle Length:	135.8
Natural Cycle:	125
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	1.27
Intersection Signal Delay:	63.1
Intersection Capacity Utilization:	101.6%
Analysis Period (min):	15

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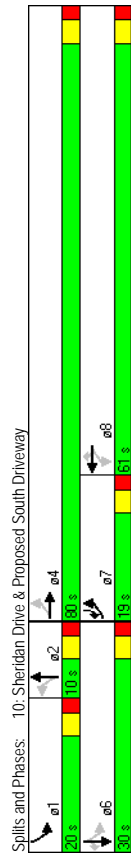
Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
10: Sheridan Drive & Proposed South Driveway 4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	217	1634	13	5	1596	120	13	0	17	236	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	350	0	75	0	425	0	0	0	0	0	0
Storage Lanes	1	0	1	1	0	0	0	0	0	0	1
Taper Length (ft)	25	25	25	25	75	25	25	25	25	25	25
Lane Util. Factor	1.00	0.999	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Fit	0.950	0.999	0.950	0.950	0.850	0.927	0.927	0.927	0.927	0.950	0.850
Satd. Flow (prot)	1770	3536	0	1770	3539	1583	0	1681	0	0	1770
Fit Permitted	0.063	0.078						0.808		0.731	
Satd. Flow (perm)	117	3536	0	145	3539	1583	0	1388	0	0	1362
Right Turn on Red	Yes	Yes						Yes		Yes	Yes
Satd. Flow (RTOR)	2					130	23				11
Link Speed (mph)	45				45		30				30
Link Distance (ft)	635				699		278				241
Travel Time (s)	9.6				10.6		6.3				5.5
Peak Hour Factor	0.92	0.87	0.87	0.94	0.94	0.92	0.75	0.92	0.75	0.92	0.92
Adj. Flow (vph)	236	1878	15	5	1698	130	17	0	23	257	0
Shared Lane Traffic (%)											320
Lane Group Flow (vph)	No	No	No	No	No	No	No	No	No	No	No
Enter Blocked Intersection	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left
Lane Alignment	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left
Median Width (ft)	12				12		0				0
Link Offset (ft)	0				0		0				0
Crosswalk Width (ft)	16				16		16				16
Two way Left Turn Lane	Yes				Yes						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	15	9	15	15	9	15	15	9
Number of Detectors	1	2	1	2	1	1	2	1	2	1	2
Detector Template	Left	Thru	Left	Thru	Right	Left	Thru	Left	Thru	Right	Left
Leading Detector (ft)	20	100	20	100	20	20	100	20	100	20	100
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size (ft)	20	6	20	6	20	20	6	20	6	20	6
Detector 1 Type	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position (ft)	94				94		94				94
Detector 2 Size (ft)	6				6		6				6
Detector 2 Type	Ch+Ex				Ch+Ex		Ch+Ex				Ch+Ex
Detector 2 Channel											
Detector 2 Extend (s)	0.0				0.0		0.0				0.0
Turn Type	pm+pt				Perm		Perm		Perm		pm+ov
Protected Phases	7	4			8		2		2		1
Permitted Phases	4				8		8		2		6
Detector Phase	7	4			8		8		2		1

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
10: Sheridan Drive & Proposed South Driveway 4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	9.0	21.0
Total Split (s)	19.0	80.0	0.0	61.0	61.0	61.0	10.0	10.0	0.0	20.0	30.0
Total Split (%)	17.3%	72.7%	0.0%	55.5%	55.5%	55.5%	9.1%	9.1%	0.0%	18.2%	27.3%
Maximum Green (s)	14.0	75.0	56.0	56.0	56.0	5.0	5.0	5.0	5.0	15.0	25.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	5.0	5.0	5.0	4.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	C-Max	None	None	None	None	None
Walk Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0	0	0	0
Act Effct Green (s)	76.2	76.2	58.4	58.4	58.4	23.8	23.8	23.8	23.8	41.6	41.6
Actuated g/C Ratio	0.69	0.69	0.53	0.53	0.53	0.22	0.22	0.22	0.22	0.38	0.38
v/c Ratio	0.86	0.77	0.06	0.90	0.14	0.13	0.13	0.13	0.13	0.87	0.53
Control Delay	53.7	11.4	16.6	32.3	2.9	20.0	20.0	20.0	20.0	70.2	28.7
Queue Delay	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.7	11.6	16.6	32.3	2.9	20.0	20.0	20.0	20.0	70.2	28.7
LOS	D	B	B	C	A	B	B	B	B	E	C
Approach Delay	D	B	B	C	A	B	B	B	B	E	C
Approach LOS	D	B	B	C	A	B	B	B	B	E	C



Intersection Summary
Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 76 (69%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.90
Intersection Signal Delay: 25.7
Intersection Capacity Utilization 88.4%
Analysis Period (min) 15

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
11: Sheridan Drive & Frankhauser Road

4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (vph)	34	1812	1862	41	52	40
Ideal Flow (vppf)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105	0	0	0	0	50
Storage Lanes	1	0	0	1	1	1
Taper Length (ft)	65	25	25	25	25	25
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Flt Permitted	0.950	0.997			0.850	
Satd. Flow (prot)	1770	3539	3529	0	1770	1583
Flt Permitted	0.070				0.950	
Satd. Flow (perm)	130	3539	3529	0	1770	1583
Right Turn on Red		Yes			Yes	
Satd. Flow (RTOR)		4			17	
Link Speed (mph)	45	45			30	
Link Distance (ft)	101.4	635			614	
Travel Time (s)	15.4	9.6			14.0	
Peak Hour Factor	0.90	0.90	0.91	0.91	0.82	0.82
Adj. Flow (vph)	38	2013	2046	45	63	49
Shared Lane Traffic (%)						
Lane Group Flow (vph)	38	2013	2091	0	63	49
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Right
Median Width(ft)	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	2	2	9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Left	Right	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94	94	94	6	6	6
Detector 2 Size(ft)	6	6	6	6	6	6
Detector 2 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 2 Channel						
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm				Perm	
Protected Phases	2	2	6	4	4	4
Permitted Phases	2	2	6	4	4	4
Detector Phase	2	2	6	4	4	4

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
11: Sheridan Drive & Frankhauser Road

4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	1.0	1.0
Minimum Split (s)	40.0	40.0	40.0	40.0	31.1	31.1
Total Split (s)	78.9	78.9	78.9	0.0	31.1	31.1
Total Split (%)	71.7%	71.7%	71.7%	0.0%	28.3%	28.3%
Maximum Green (s)	74.1	74.1	74.1	26.0	26.0	26.0
Yellow Time (s)	3.9	3.9	3.9	3.2	3.2	3.2
All-Red Time (s)	0.9	0.9	0.9	1.9	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.8	4.8	4.8	4.0	5.1	5.1
LeadLag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0	15.0	19.0	19.0	19.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effct Green (s)	93.9	93.9	93.9	9.3	9.3	9.3
Actuated g/C Ratio	0.85	0.85	0.85	0.08	0.08	0.08
v/c Ratio	0.34	0.67	0.69	0.42	0.33	0.33
Control Delay	10.1	4.8	4.0	55.5	39.2	39.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.1	4.8	4.0	55.5	39.2	39.2
LOS	B	A	A	E	E	D
Approach Delay	4.9	4.0	4.0	48.3		
Approach LOS	A	A	A	D		
Intersection Summary						
Area Type:	Other					
Cycle Length:	110					
Actuated Cycle Length:	110					
Offset:	66 (60%), Referenced to phase 2:EBTL and 6:WBT, Start of Green					
Natural Cycle:	90					
Control Type:	Actuated-Coordinated					
Maximum v/c Ratio:	0.69					
Intersection Signal Delay:	5.6					
Intersection Capacity Utilization:	64.4%					
Analysis Period (min):	15					
Spills and Phases:	11: Sheridan Drive & Frankhauser Road					
	↔	↔	↔	↔	↔	↔
	78.9 s				31.1 s	

Lanes, Volumes, Timings
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
12: Sheridan Drive & I-290 NB

4/24/2014

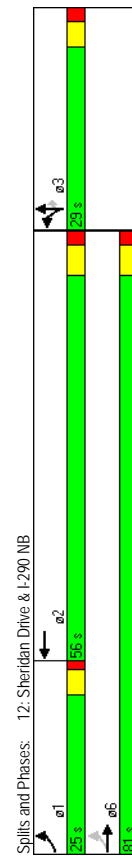
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	355	1429	0	0	1269	683	317	0	439	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	0	0	230	0	0	0	0	0	0
Storage Lanes	1	0	0	0	1	0	0	0	0	0	0
Taper Length (ft)	105	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	0.95	0.91	0.95	1.00	1.00
Flt Protected	0.950				0.948			0.882	0.850		
Satd. Flow (prot)	1770	5085	0	0	4821	0	1681	1479	1504	0	0
Flt Permitted	0.071						0.950	0.989			
Satd. Flow (perm)	132	5085	0	0	4821	0	1681	1479	1504	0	0
Right Turn on Red			Yes			Yes			Yes		Yes
Satd. Flow (RTOR)			162				65		65		30
Link Speed (mph)		45			45		30		30		30
Link Distance (ft)		610			193		830		830		423
Travel Time (s)		9.2			2.9		18.9		18.9		9.6
Peak Hour Factor	0.99	0.99	0.99	0.92	0.92	0.92	0.80	0.80	0.80	0.92	0.92
Adj. Flow (vph)	359	1443	0	0	1379	742	396	0	549	0	0
Shared Lane Traffic (%)							17%		45%		
Lane Group Flow (vph)	359	1443	0	0	2121	0	329	314	302	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Left	Right	Left	Right
Median Width (ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset (ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width (ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane											
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	2	9	15	1	2	9	15	9
Number of Detectors	1	2		Thru		Left	Thru	Right			
Detector Template	20	100	100	100	20	100	20	100	20	100	20
Leading Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position (ft)	20	6	6	6	6	20	6	20	6	6	20
Detector 1 Size (ft)	6	6	6	6	6	6	6	6	6	6	6
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position (ft)	94	6	6	6	6	94	6	6	6	6	94
Detector 2 Size (ft)	6	6	6	6	6	6	6	6	6	6	6
Detector 2 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 2 Channel											
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	pm+pt			custom					Perm		
Protected Phases	1	6		2		3	3		3		3
Permitted Phases	6	6		2		3	3		3		3
Detector Phase	1	6		2		3	3		3		3

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
12: Sheridan Drive & I-290 NB

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	1.0	4.0		4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	6.2	33.9		27.8		29.0	29.0	29.0	29.0	29.0	29.0
Total Split (s)	25.0	81.0	0.0	56.0	0.0	29.0	29.0	29.0	29.0	0.0	0.0
Total Split (%)	22.7%	73.6%	0.0%	0.0%	0.0%	26.4%	26.4%	26.4%	26.4%	0.0%	0.0%
Maximum Green (s)	20.7	75.1		50.2		23.8	23.8	23.8	23.8		
Yellow Time (s)	3.2	3.9		3.9		3.2	3.2	3.2	3.2		
All-Red Time (s)	1.1	2.0		1.9		2.0	2.0	2.0	2.0		
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.3	5.9	4.0	5.8	4.0	5.2	5.2	5.2	5.2	4.0	4.0
Lead/Lag	Lead	Lag		Lag							
Vehicle Extension (s)	2.0	3.0		3.0		2.0	2.0	2.0	2.0		
Recall Mode	None	C-Max		C-Max		None	None	None	None		
Walk Time (s)	7.0	7.0		7.0							
Flash Dont Walk (s)	21.0	15.0		15.0							
Pedestrian Calls (#/hr)	0	0		0							
Act Effct Green (s)	77.5	75.9		52.2		23.0	23.0	23.0	23.0		
Actuated g/C Ratio	0.70	0.69		0.47		0.21	0.21	0.21	0.21		
v/c Ratio	0.94	0.41		0.89		0.93	0.87	0.83	0.83		
Control Delay	55.5	8.2		16.8		77.5	57.7	51.9	51.9		
Queue Delay	0.0	0.0		0.0		0.0	0.0	0.0	0.0		
Total Delay	55.5	8.2		16.8		77.5	57.7	51.9	51.9		
LOS	E	A		B		E	E	D	D		
Approach Delay	17.6			16.8							
Approach LOS	B			B							



Spills and Phases: 12: Sheridan Drive & I-290 NB
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
13: Sheridan Drive & Harlem Road

4/24/2014

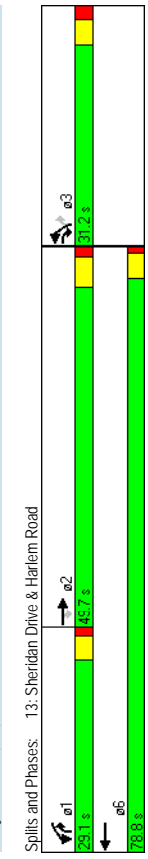
Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔↔	↔↔	↔↔	↔↔
Volume (vph)	1027	604	488	1098	267
Ideal Flow (vphpl)	1900	1900	1900	1900	1900
Storage Length (ft)	0	215	0	140	0
Storage Lanes	1	1	2	2	2
Taper Length (ft)	230	100	100	100	25
Lane Util. Factor	0.95	1.00	0.97	0.95	0.88
Flt Protected	0.850	0.950	0.950	0.950	0.850
Satd. Flow (prot)	3539	1583	3433	3539	3433
Flt Permitted	0.950	0.950	0.950	0.950	0.950
Satd. Flow (perm)	3539	1583	3433	3539	3433
Right Turn on Red	No	No	No	No	Yes
Satd. Flow (RTOR)	45	45	45	35	57
Link Speed (mph)	314	610	338	610	338
Link Distance (ft)	4.8	9.2	6.6	9.2	6.6
Travel Time (s)	0.98	0.95	0.95	0.85	0.85
Peak Hour Factor	1048	616	514	1156	314
Adj. Flow (vph)	1048	616	514	1156	314
Shared Lane Traffic (%)	No	No	No	No	No
Lane Group Flow (vph)	Left	Right	Left	Left	Right
Enter Blocked Intersection	12	24	24	24	24
Lane Alignment	0	0	0	0	0
Median Width(ft)	16	16	16	16	16
Link Offset(ft)	1.00	1.00	1.00	1.00	1.00
Crosswalk Width(ft)	9	15	15	15	9
Two way Left Turn Lane	2	1	2	1	1
Headway Factor	Thru	Right	Left	Thru	Left
Turning Speed (mph)	100	20	100	20	20
Number of Detectors	0	0	0	0	0
Detector Template	0	0	0	0	0
Leading Detector (ft)	6	20	6	20	20
Trailing Detector (ft)	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0
Detector 1 Size(ft)	6	20	6	20	20
Detector 1 Type	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 1 Channel	0.0	0.0	0.0	0.0	0.0
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94	94	94	94	94
Detector 2 Size(ft)	6	6	6	6	6
Detector 2 Type	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 2 Channel	0.0	0.0	0.0	0.0	0.0
Detector 2 Extend (s)	2	3	1	6	3
Turn Type	2	3	1	6	3
Protected Phases	2	3	1	6	3
Permitted Phases	2	3	1	6	3
Detector Phase	2	3	1	6	3

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
13: Sheridan Drive & Harlem Road

4/24/2014

Lane Group	EBT	WBL	WBT	NBL	NBR
Switch Phase	↔	↔	↔	↔	↔
Minimum Initial (s)	1.0	1.0	4.0	1.0	1.0
Minimum Split (s)	30.5	6.2	5.3	32.3	6.2
Total Split (s)	49.7	31.2	29.1	78.8	31.2
Total Split (%)	45.2%	28.4%	26.5%	71.6%	28.4%
Maximum Green (s)	44.2	26.0	24.8	74.5	26.0
Yellow Time (s)	3.9	3.2	3.2	3.2	3.2
All-Red Time (s)	1.6	2.0	1.1	2.0	1.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.2	4.3	4.3	5.2
Lead/Lag	Lag	Lead	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0
Recall Mode	C-Max	None	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	18.0	21.0	21.0	21.0	21.0
Pedestrian Calls (#/hr)	0	0	0	0	0
Act Effct Green (s)	57.2	77.4	23.1	85.7	14.8
Actuated g/C Ratio	0.52	0.70	0.21	0.78	0.13
v/c Ratio	0.57	0.55	0.71	0.42	0.68
Control Delay	20.7	10.8	32.4	7.0	52.8
Queue Delay	0.0	0.0	0.0	0.6	0.0
Total Delay	20.7	10.8	32.4	7.6	52.8
LOS	C	B	C	A	D
Approach Delay	17.0	15.2	37.8	15.2	37.8
Approach LOS	B	B	D	B	D



Intersection Summary
Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 66 (60%), Referenced to phase 2:EBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 21.9
Intersection Capacity Utilization: 63.0%
Analysis Period (min): 15
Spills and Phases: 13: Sheridan Drive & Harlem Road
e1
e2
e3
e5
e6
78.8 s
31.2 s
23.1 s

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
14: 1-290 SB & Harlem Road

4/24/2014

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (vph)	234	404	583	11	533	524
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	0	0	330	0
Storage Lanes	1	1	0	0	1	0
Taper Length (ft)	25	25	25	25	75	25
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	3529	0	1770	3539
Flt Permitted	0.950				0.147	
Satd. Flow (perm)	1770	1583	3529	0	274	3539
Right Turn on Red	Yes	Yes	Yes	Yes	Yes	Yes
Satd. Flow (RTOR)	66	2				
Link Speed (mph)	30	35				35
Link Distance (ft)	333	250				456
Travel Time (s)	7.6	4.9				8.9
Peak Hour Factor	0.69	0.69	0.77	0.77	0.92	0.92
Adj. Flow (vph)	339	586	757	14	579	570
Shared Lane Traffic (%)						
Lane Group Flow (vph)	No	No	No	No	No	No
Enter Blocked Intersection	Left	Right	Left	Right	Left	Left
Lane Alignment	12	12			12	12
Median Width(ft)	0	0			0	0
Link Offset(ft)	16	16			16	16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru	Left	Thru	
Leading Detector (ft)	20	20	100	20	100	
Trailing Detector (ft)	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	
Detector 1 Size(ft)	20	20	6	20	6	
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			CI+EX			CI+EX
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type		pm+ov			pm+pl	
Protected Phases	3	1	2	1	1	6
Permitted Phases	3	1	2	1	1	6

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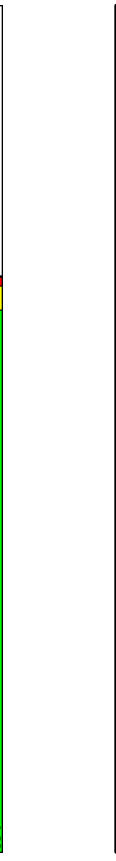
Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
14: 1-290 SB & Harlem Road

4/24/2014

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	9.2	30.6	9.2	21.0	
Total Split (s)	40.0	35.0	50.0	0.0	35.0	85.0
Total Split (%)	32.0%	28.0%	40.0%	0.0%	28.0%	68.0%
Maximum Green (s)	35.2	30.7	45.0	30.7	80.0	
Yellow Time (s)	3.2	3.2	3.6	3.2	3.6	
All-Red Time (s)	1.6	1.1	1.4	1.1	1.4	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.8	4.3	5.0	4.0	4.3	5.0
Lead/Lag	Lead	Lead	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Min	None	None	None
Walk Time (s)			10.0			
Flash Dont Walk (s)			15.0			
Pedestrian Calls (#/hr)			0			
Act Effct Green (s)	24.0	60.2	28.6	65.0	64.3	
Actuated g/C Ratio	0.24	0.61	0.29	0.66	0.65	
v/c Ratio	0.78	0.59	0.75	0.88	0.25	
Control Delay	48.9	13.9	37.0	39.9	8.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	48.9	13.9	37.0	39.9	8.0	
LOS	D	B	D	D	A	
Approach Delay	26.7		37.0		24.1	
Approach LOS	C		D		C	

Intersection Summary

Area Type:	Other
Cycle Length:	125
Actuated Cycle Length:	98.3
Natural Cycle:	80
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.88
Intersection Signal Delay:	28.4
Intersection Capacity Utilization:	70.7%
Analysis Period (min):	15



Lanes, Volumes, Timings
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
56: Maple Road & Proposed North Driveway

4/24/2014

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔↔	↔↔	↔↔	↔↔
Volume (vph)	1294	67	114	981	80
Ideal Flow (vpphp)	1900	1900	1900	1900	1900
Storage Length (ft)	0	225	0	150	0
Storage Lanes	0	1	1	1	1
Taper Length (ft)	25	25	25	25	25
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00
Flt	0.993				0.850
Flt Protected		0.950		0.950	
Satd. Flow (prot)	3514	0	1770	3539	1770
Flt Permitted		0.129		0.950	
Satd. Flow (perm)	3514	0	240	3539	1770
Right Turn on Red	Yes				Yes
Satd. Flow (RTOR)	12				18
Link Speed (mph)	45		45	30	
Link Distance (ft)	1000		928	337	
Travel Time (s)	15.2		14.1	7.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1407	73	124	1066	87
Shared Lane Traffic (%)					
Lane Group Flow (vph)	1480	0	124	1066	87
Enter Blocked Intersection	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Right
Median Width(ft)	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0
Crosswalk Width(ft)	16		16	16	
Two way Left Turn Lane	Yes		Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15	15	15	9
Number of Detectors	2	1	2	1	1
Detector Template	Thru	Left	Thru	Left	Right
Leading Detector (ft)	100	20	100	20	20
Trailing Detector (ft)	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0
Detector 1 Size(ft)	6	20	6	20	20
Detector 1 Type	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 1 Channel					
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94		94		
Detector 2 Size(ft)	6		6		
Detector 2 Type	Ch+Ex		Ch+Ex		
Detector 2 Channel					
Detector 2 Extend (s)	0.0		0.0		
Turn Type		pm+pl			pm+ov
Protected Phases	4	3	8	2	3
Permitted Phases		8			2
Detector Phase	4	3	8	2	3

Lanes, Volumes, Timings
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
56: Maple Road & Proposed North Driveway

4/24/2014

Lane Group	EBT	WBL	WBT	NBL	NBR
Switch Phase					
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	8.0	20.0	20.0	8.0
Total Split (s)	32.0	0.0	40.0	20.0	8.0
Total Split (%)	53.3%	0.0%	66.7%	33.3%	13.3%
Maximum Green (s)	28.0	4.0	36.0	16.0	4.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lead	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	Min	None
Walk Time (s)	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0
Act Effct Green (s)	27.1	33.0	33.0	7.9	16.2
Actuated g/C Ratio	0.55	0.67	0.67	0.16	0.33
v/c Ratio	0.76	0.43	0.45	0.30	0.31
Control Delay	13.1	7.7	4.6	22.4	14.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	13.1	7.7	4.6	22.4	14.1
LOS	B	A	A	C	B
Approach Delay	13.1		4.9	17.0	
Approach LOS	B		A	B	

Intersection Summary

Area Type:	Other
Cycle Length:	60
Actuated Cycle Length:	49.2
Natural Cycle:	60
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.76
Intersection Signal Delay:	10.1
Intersection Capacity Utilization:	58.6%
Analysis Period (min):	15
ICU Level of Service:	B



Lanes, Volumes, Timings
SRF & Associates

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
59: Sheridan Drive & Proposed Ltd. Access Driveway

4/24/2014



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (vph)	30	1857	1683	50	0	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200	425	0	0	0	0
Storage Lanes	1	0	0	1	0	1
Taper Length (ft)	25	75	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00
Flt Protected	0.950			0.850		0.865
Satd. Flow (prot)	1770	3539	3539	1583	0	1611
Flt Permitted	0.950					
Satd. Flow (perm)	1770	3539	3539	1583	0	1611
Link Speed (mph)	45	45	45	280	30	280
Link Distance (ft)	699	969	969	280	6.4	280
Travel Time (s)	10.6	14.7	14.7	6.4	6.4	6.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	33	2018	1829	54	0	41
Shared Lane Traffic (%)						
Lane Group Flow (vph)	33	2018	1829	54	0	41
Enter Blocked Intersection	No	Yes	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)	12	12	12	0	0	0
Link Offset(ft)	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	Free	Free	Free	Stop	9
Sign Control	Free	Free	Free	Free	Stop	Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	56.5%					
Analysis Period (min)	15					
ICU Level of Service:	B					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
59: Sheridan Drive & Proposed Ltd. Access Driveway

4/24/2014



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (veh/h)	30	1857	1683	50	0	38
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	33	2018	1829	54	0	41
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL TWLTL					
Median storage (veh)	2 2					
Upstream signal (ft)	699 969					
pX, platoon unblocked	0.63					
vC, conflicting volume	1884					
vC1, stage 1 cont vol	1829					
vC2, stage 2 cont vol	1074					
vCu, unblocked vol	1230					
IC, single (s)	4.1					
IC, 2 stage (s)	5.8					
IF (s)	2.2					
p0 queue free %	91					
cM capacity (veh/h)	355					
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3
Volume Total	33	1009	1009	915	915	54
Volume Left	33	0	0	0	0	0
Volume Right	0	0	0	0	0	54
cSH	355	1700	1700	1700	1700	684
Volume to Capacity	0.09	0.59	0.59	0.54	0.54	0.03
Queue Length 95th (ft)	8	0	0	0	0	0
Control Delay (s)	16.2	0.0	0.0	0.0	0.0	10.6
Lane LOS	C					B
Approach Delay (s)	0.3					
Approach LOS	B					
Intersection Summary						
Average Delay	0.2					
Intersection Capacity Utilization	56.5%					
Analysis Period (min)	15					
ICU Level of Service	B					

A8

**Level of Service Calculations:
Full Development Conditions
Alternative Concept Plans**

Capacity Analysis Results - Alternative Concept Plans

INTERSECTION	FULL DEVELOPMENT - ALTERNATIVE 1		FULL DEVELOPMENT - ALTERNATIVE 2		FULL DEVELOPMENT - ALTERNATIVE 3		FULL DEVELOPMENT - ALTERNATIVE 4		FULL DEVELOPMENT - ALTERNATIVE 5	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Maple Road/Millersport Hwy SB (S)										
Eastbound Left – Maple Road	A(2.9)	A(5.6)	A(2.9)	A(5.6)	A(2.9)	A(6.1)	A(3.3)	A(6.4)	A(2.9)	A(6.0)
Eastbound Thru – Maple Road	A(3.0)	A(6.0)	A(3.0)	A(6.0)	A(3.0)	A(6.8)	A(3.6)	A(6.5)	A(3.1)	A(6.4)
Westbound Thru – Maple Road	A(5.4)	A(7.7)	A(5.4)	A(7.5)	A(5.6)	A(7.8)	A(5.7)	B(10.3)	A(6.4)	A(8.5)
Westbound Right – Maple Road	A(0.3)	A(0.2)	A(0.3)	A(0.2)	A(0.3)	A(0.2)	A(0.2)	A(0.1)	A(0.2)	A(0.2)
Southbound Left – Millersport Hwy SB	C(29.9)	C(25.2)	C(29.9)	C(25.4)	C(30.0)	C(30.2)	C(31.3)	C(24.2)	C(30.3)	C(24.9)
Southbound Right – Millersport Hwy SB	B(11.4)	C(23.9)	B(11.4)	C(23.8)	B(11.3)	C(25.9)	B(10.5)	C(27.0)	B(11.3)	C(25.5)
Overall LOS/Delay (sec/veh)	A(4.5)	A(8.1)	A(4.5)	A(8.0)	A(4.6)	A(8.6)	A(5.1)	A(9.6)	A(5.0)	A(8.6)
Maple Road/Millersport Hwy NB (S)										
Eastbound Left – Maple Road	B(14.0)	D(44.2)	B(14.2)	D(43.3)	B(15.0)	F(83.3)	B(14.4)	F(112.8)	B(17.2)	E(66.8)
Eastbound Thru – Maple Road	A(9.9)	B(11.0)	A(9.8)	B(11.0)	A(10.0)	B(11.9)	B(10.9)	B(11.7)	B(11.6)	B(11.5)
Westbound Thru/Right – Maple Road	B(11.7)	B(14.9)	B(11.7)	B(14.9)	B(12.0)	B(16.0)	B(11.7)	B(16.8)	B(13.5)	B(15.7)
Northbound Left – Millersport Hwy NB	B(19.3)	B(16.1)	B(19.4)	B(16.1)	B(19.3)	B(16.2)	B(19.4)	B(16.2)	B(17.7)	B(16.2)
Northbound Thru/Right – Millersport Hwy NB	C(26.3)	D(42.3)	C(26.3)	D(43.0)	C(28.3)	D(50.4)	D(43.6)	D(42.8)	C(24.2)	D(45.3)
Overall LOS/Delay (sec/veh)	B(14.7)	B(19.8)	B(14.7)	B(19.9)	B(15.2)	C(22.8)	B(17.9)	C(23.0)	B(15.4)	C(21.4)
Maple Road/Maplemere Road (S)										
Eastbound Left – Maple Road	A(6.2)	A(6.7)	A(6.3)	A(6.6)	A(6.1)	A(7.0)	A(5.8)	A(7.8)	A(6.3)	A(7.0)
Eastbound Thru/Right – Maple Road	A(6.6)	A(7.6)	A(6.6)	A(7.6)	A(6.4)	A(8.0)	A(6.8)	A(7.6)	A(6.7)	A(7.8)
Westbound Left – Maple Road	A(5.5)	A(7.1)	A(5.5)	A(7.2)	A(5.3)	A(7.9)	A(5.5)	A(7.2)	A(5.6)	A(7.4)
Westbound Thru/Right – Maple Road	A(6.8)	A(6.6)	A(6.8)	A(6.5)	A(6.7)	A(6.7)	A(6.3)	A(7.3)	A(6.9)	A(6.8)
Northbound – Maplemere Road	B(16.1)	B(15.8)	B(16.6)	B(16.0)	B(16.8)	B(16.4)	B(19.4)	B(15.9)	B(17.3)	B(16.2)
Southbound – Maplemere Road	B(14.1)	C(22.0)	B(14.2)	C(22.4)	B(15.0)	C(24.1)	B(15.7)	C(22.2)	B(14.7)	C(22.7)
Overall LOS/Delay (sec/veh)	A(7.3)	A(8.1)	A(7.4)	A(8.1)	A(7.3)	A(8.4)	A(7.4)	A(8.3)	A(7.5)	A(8.3)
Maple Road/Donna Lea Boulevard (U)										
Westbound Left – Maple Road	B(10.7)	C(16.2)	B(10.7)	C(16.4)	B(10.8)	C(19.1)	B(11.7)	C(16.3)	B(10.9)	C(17.1)
Northbound – Donna Lea Boulevard	B(15.0)	C(21.6)	B(15.0)	C(21.9)	B(15.3)	C(25.7)	B(15.8)	C(22.0)	B(15.2)	C(22.9)
Maple Road/Sandhurst Lane (U)										
Eastbound Left – Maple Road	B(10.8)	A(0.0)	B(10.8)	A(0.0)	B(11.0)	A(0.0)	B(12.3)	A(0.0)	B(11.4)	A(0.0)
Westbound Left – Maple Road	B(10.6)	B(13.0)	B(10.7)	B(12.9)	B(10.8)	B(13.7)	B(10.8)	B(14.7)	B(11.1)	B(14.1)
Northbound – Sandhurst Lane	C(21.6)	D(29.7)	C(22.0)	D(29.5)	C(22.4)	D(33.9)	C(22.9)	E(39.3)	C(23.8)	E(36.0)
Southbound Audubon Golf Course	C(23.2)	A(0.0)	C(23.1)	A(0.0)	C(24.1)	A(0.0)	D(30.2)	A(0.0)	D(26.0)	A(0.0)
Maple Road/North Forest Road (S)										
Eastbound Left – Maple Road	B(19.0)	C(24.4)	B(19.2)	C(25.0)	B(19.9)	C(34.5)	C(23.6)	C(34.0)	C(21.5)	C(36.4)
Eastbound Thru – Maple Road	D(41.8)	D(48.2)	D(42.4)	D(48.0)	D(42.9)	D(54.5)	D(44.0)	E(66.1)	D(44.7)	E(57.1)
Eastbound Right – Maple Road	A(5.2)	A(5.2)	A(5.2)	A(5.2)	A(5.2)	A(5.9)	A(5.2)	A(6.5)	A(5.5)	A(6.1)
Westbound Left – Maple Road	D(46.2)	D(54.4)	D(47.2)	D(54.6)	D(48.0)	E(59.0)	D(52.4)	E(57.5)	D(49.9)	E(59.1)
Westbound Thru – Maple Road	C(28.3)	C(32.5)	C(28.1)	C(32.9)	C(28.7)	C(34.7)	C(32.0)	C(33.3)	C(29.2)	C(34.5)
Westbound Right – Maple Road	D(44.4)	D(47.4)	B(13.8)	B(16.5)	B(13.9)	B(16.8)	B(14.2)	B(16.9)	B(13.9)	B(16.8)
Northbound Left – North Forest Road	D(43.0)	E(62.2)	D(43.0)	D(47.7)	D(46.2)	D(53.1)	D(52.1)	D(51.1)	D(49.6)	D(52.9)
Northbound Thru – North Forest Road	D(43.0)	E(62.2)	D(43.0)	E(61.5)	D(43.3)	E(64.2)	D(42.8)	E(68.7)	D(43.8)	E(66.3)
Northbound Right – North Forest Road	B(15.1)	C(20.5)	B(15.4)	C(20.5)	B(15.5)	C(21.3)	B(15.5)	C(22.3)	B(16.2)	C(21.8)
Southbound Left – North Forest Road	C(28.9)	E(60.8)	C(29.1)	E(59.6)	C(29.2)	E(67.7)	C(29.4)	E(72.2)	C(29.9)	E(72.2)
Southbound Thru – North Forest Road	D(53.6)	E(63.5)	D(53.9)	E(63.6)	D(54.6)	E(66.6)	E(57.4)	E(65.2)	E(56.5)	E(66.7)
Southbound Right – North Forest Road	B(13.3)	B(11.5)	B(13.2)	B(12.0)	B(14.7)	B(14.6)	C(20.6)	B(11.8)	B(17.2)	B(14.5)
Overall LOS/Delay (sec/veh)	C(34.8)	D(42.5)	D(35.2)	D(42.4)	C(35.6)	D(46.3)	D(37.5)	D(50.3)	D(36.8)	D(47.5)

Capacity Analysis Results - Alternative Concept Plans

INTERSECTION	FULL DEVELOPMENT - ALTERNATIVE 1		FULL DEVELOPMENT - ALTERNATIVE 2		FULL DEVELOPMENT - ALTERNATIVE 3		FULL DEVELOPMENT - ALTERNATIVE 4		FULL DEVELOPMENT - ALTERNATIVE 5	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Sheridan Drive/Mill Street (S)										
Eastbound Left - Sheridan Drive	C(27.4)	D(46.1)	C(27.4)	D(46.1)	C(28.2)	E(56.4)	C(31.2)	E(67.1)	C(28.8)	E(57.9)
Eastbound Thru/Right - Sheridan Drive	F(*)	F(*)	F(*)	F(*)	F(*)	F(*)	F(*)	F(*)	F(*)	F(*)
Westbound Left - Sheridan Drive	D(53.1)	D(45.9)	D(53.0)	D(45.9)	D(53.9)	D(45.9)	E(56.6)	D(45.9)	E(54.8)	D(45.9)
Westbound Thru/Right - Sheridan Drive	B(19.3)	E(56.7)	B(19.3)	E(58.5)	C(20.1)	E(72.7)	C(23.9)	E(59.1)	C(21.1)	E(69.9)
Northbound Left - Mill Street	C(34.3)	C(21.7)	C(34.2)	C(21.7)	C(34.2)	C(21.8)	C(35.4)	C(21.7)	C(34.6)	C(21.8)
Northbound Thru/Right - Mill Street	C(31.5)	C(22.7)	C(31.5)	C(22.7)	C(31.3)	C(22.7)	C(30.5)	C(22.7)	C(31.0)	C(22.7)
Southbound Left - Mill Street	D(43.4)	D(36.4)	D(43.4)	D(36.4)	D(43.2)	D(36.4)	D(42.8)	D(36.4)	D(43.2)	D(36.4)
Southbound Thru/Right - Mill Street	E(59.7)	C(34.3)	E(59.7)	C(34.3)	E(59.4)	C(33.7)	E(59.9)	C(34.1)	E(59.5)	C(33.9)
Overall LOS/Delay (sech)	E(75.7)	F(110.1)	E(78.4)	F(109.8)	F(81.0)	F(*)	F(83.7)	F(*)	F(88.1)	F(*)
Sheridan Drive/North Forest Road (S)										
Eastbound Left - Sheridan Drive	C(21.7)	D(43.6)	C(21.2)	D(43.1)	C(22.1)	D(43.3)	C(32.0)	D(43.8)	C(25.2)	D(43.3)
Eastbound Thru - Sheridan Drive	D(49.5)	D(54.1)	D(49.8)	D(53.3)	D(50.1)	E(63.7)	D(54.1)	E(69.8)	D(54.2)	E(67.4)
Eastbound Right - Sheridan Drive	B(16.0)	B(17.2)	B(16.1)	B(17.0)	B(16.1)	B(18.3)	B(16.4)	B(18.7)	B(16.6)	B(18.7)
Westbound Left - Sheridan Drive	E(57.3)	F(*)	E(57.0)	F(*)	E(57.2)	F(*)	E(59.0)	F(*)	E(58.0)	F(*)
Westbound Thru/Right - Sheridan Drive	C(33.6)	D(41.8)	C(33.3)	D(42.3)	C(34.3)	D(48.2)	D(43.2)	D(44.7)	D(36.6)	D(47.6)
Northbound Left - North Forest Road	D(41.8)	E(65.1)	D(42.3)	E(67.0)	D(45.0)	F(89.4)	D(49.6)	E(75.9)	D(49.6)	F(90.5)
Northbound Thru - North Forest Road	D(42.7)	E(60.9)	D(46.0)	E(61.1)	D(48.9)	F(96.2)	D(49.8)	F(*)	D(51.1)	F(101.6)
Northbound Right - North Forest Road	B(11.7)	B(12.5)	B(12.0)	B(12.7)	B(12.3)	B(14.0)	B(12.5)	B(14.8)	B(12.7)	B(14.2)
Southbound Left - North Forest Road	C(27.5)	C(29.8)	C(28.0)	C(30.6)	C(28.9)	D(36.2)	C(29.3)	D(50.7)	C(30.1)	D(38.1)
Southbound Thru - North Forest Road	E(58.8)	E(61.2)	E(58.7)	E(61.3)	E(58.7)	E(61.1)	E(60.0)	E(61.4)	E(59.6)	E(61.3)
Southbound Right - North Forest Road	A(9.7)	A(8.9)	A(9.4)	A(8.9)	A(9.9)	A(8.8)	B(12.0)	A(9.0)	B(10.8)	A(8.8)
Overall LOS/Delay (sech)	D(40.5)	E(55.9)	D(40.7)	E(56.2)	D(41.5)	E(64.9)	D(46.4)	E(67.9)	D(43.9)	E(66.3)
North Forest Road/C.C. Driveway/Proposed Dwy (U)										
Eastbound - C.C. Driveway/Proposed Driveway			C(18.0)	D(30.5)		N/A	C(20.0)	F(113.5)		
Eastbound Left - C.C. Driveway/Proposed Driveway	N/A		N/A		D(28.6)	F(70.6)				N/A
Eastbound Right - C.C. Driveway/Proposed Driveway			A(0.0)	A(1.0)	C(15.1)	C(16.6)				
Northbound - North Forest Road					A(0.2)	A(1.3)	A(1.0)	A(1.0)		
Sheridan Drive/Fenwick Road/Proposed Driveway (U)										
Eastbound Left - Sheridan Drive			B(14.9)	C(16.3)		N/A	F(52.9)	C(17.0)	D(25.8)	D(34.9)
Westbound Thru - Sheridan Drive										
Westbound Left - Sheridan Drive	C(15.4)	C(17.1)	B(15.0)	C(16.4)	C(15.9)	C(19.7)	B(15.3)	C(16.7)	C(15.2)	C(16.3)
Westbound Right - Sheridan Drive										
Northbound - Fenwick Road										
Southbound - Proposed Driveway										
Southbound Left/Thru - Proposed Driveway										
Southbound Right - Proposed Driveway										
Sheridan Drive/Frankhauser Road (S)										
Eastbound Left - Sheridan Drive	A(5.4)	B(10.1)	A(8.4)	C(27.9)	B(10.2)	F(*)	E(78.1)	D(48.8)	C(23.9)	F(108.8)
Eastbound Thru - Sheridan Drive	A(5.2)	A(5.9)	A(6.1)	A(6.1)	A(5.6)	B(11.4)	A(7.4)	B(11.6)	A(6.9)	B(12.0)
Westbound Thru/Right - Sheridan Drive	A(4.8)	A(5.9)	A(5.8)	A(6.0)	A(5.2)	B(11.1)	A(5.3)	B(15.6)	A(6.0)	B(12.9)
Southbound Left - Frankhauser Road	D(37.7)	D(35.0)	C(34.4)	D(36.5)	D(36.7)	C(34.9)	D(36.9)	C(31.0)	C(35.0)	C(33.2)
Southbound Right - Frankhauser Road	C(31.4)	C(33.8)	D(37.0)	C(37.4)	D(36.2)	D(39.0)	D(36.8)	D(38.6)	D(37.4)	D(39.0)
Overall LOS/Delay (sech)	A(5.9)	A(7.0)	A(7.3)	A(7.8)	A(6.5)	B(19.5)	B(10.5)	B(15.8)	A(7.9)	B(15.9)

Capacity Analysis Results - Alternative Concept Plans

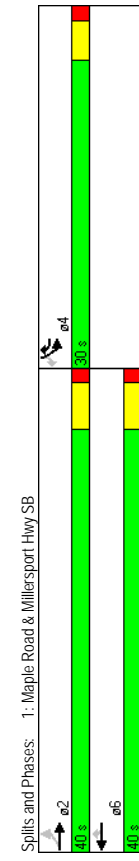
INTERSECTION	FULL DEVELOPMENT - ALTERNATIVE 1		FULL DEVELOPMENT - ALTERNATIVE 2		FULL DEVELOPMENT - ALTERNATIVE 3		FULL DEVELOPMENT - ALTERNATIVE 4		FULL DEVELOPMENT - ALTERNATIVE 5	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Sheridan Drive/I-290 NB (S)										
Eastbound Left – Sheridan Drive	C(34.1)	D(55.0)	C(37.0)	D(54.5)	D(39.9)	D(54.9)	D(40.5)	D(54.5)	D(49.5)	E(55.1)
Eastbound Thru – Sheridan Drive	A(6.3)	A(9.9)	A(6.3)	B(10.1)	A(6.6)	B(10.8)	A(8.2)	B(10.1)	A(7.6)	B(10.9)
Westbound Thru/Right – Sheridan Drive	B(16.7)	C(32.7)	B(17.0)	C(32.7)	B(17.4)	D(46.3)	B(18.3)	E(62.3)	B(19.5)	E(61.4)
Northbound Left – I-290 NB	D(54.8)	D(48.7)	D(54.8)	D(48.9)	D(54.7)	D(49.0)	D(53.6)	D(48.9)	D(52.1)	D(48.7)
Northbound Thru – I-290 NB	D(46.2)	D(42.4)	D(45.6)	D(42.1)	D(48.1)	D(46.7)	D(54.0)	D(42.7)	D(49.9)	D(46.4)
Northbound Right – I-290 NB	D(44.2)	D(39.6)	D(43.6)	D(40.2)	D(46.2)	D(44.4)	D(51.2)	D(47.0)	D(48.0)	D(43.6)
Overall LOS/Delay (sec/veh)	B(18.5)	C(30.0)	B(18.7)	C(29.9)	B(19.3)	D(36.0)	C(20.3)	D(43.8)	C(21.2)	D(43.1)
Sheridan Drive/Harlem Road (S)										
Eastbound Thru – Sheridan Drive	B(17.9)	B(16.5)	B(18.0)	B(16.6)	B(18.6)	B(19.6)	C(22.3)	B(18.2)	C(20.9)	B(18.9)
Eastbound Right – Sheridan Drive	A(6.6)	A(8.0)	A(6.7)	A(8.0)	A(6.8)	A(9.5)	A(8.0)	A(9.2)	A(7.7)	A(9.3)
Westbound Left – Sheridan Drive	D(51.9)	D(52.5)	D(52.2)	D(52.4)	D(51.4)	D(47.9)	D(44.0)	D(53.9)	D(47.3)	D(53.3)
Westbound Thru – Sheridan Drive	A(4.1)	A(4.5)	A(4.1)	A(4.5)	A(4.1)	A(5.1)	A(4.1)	A(5.3)	A(4.2)	A(5.2)
Northbound Left – Harlem Road	D(54.1)	D(53.0)	D(54.1)	D(53.0)	D(54.1)	D(53.0)	D(54.1)	D(53.0)	D(54.1)	D(53.0)
Northbound Right – Harlem Road	C(32.6)	C(31.3)	C(31.8)	C(32.4)	C(34.5)	C(33.8)	C(43.2)	C(28.8)	C(34.6)	C(33.7)
Overall LOS/Delay (sec/veh)	C(24.4)	C(21.5)	C(24.3)	C(21.7)	C(24.9)	C(22.7)	C(27.6)	C(22.0)	C(25.3)	C(23.3)
Harlem Road/I-290 SB (S)										
Westbound Left – I-290 SB	D(35.4)	D(43.9)	D(35.6)	D(44.1)	D(37.2)	D(47.3)	D(45.1)	D(47.0)	D(43.4)	D(49.1)
Westbound Right – I-290 SB	B(16.7)	B(12.0)	B(16.3)	B(12.4)	B(18.2)	B(14.8)	C(27.9)	B(11.9)	B(19.8)	B(14.4)
Northbound Thru/Right – Harlem Road	C(31.2)	C(34.2)	C(31.3)	C(34.3)	C(32.5)	D(35.9)	D(37.2)	D(36.5)	D(36.4)	D(37.1)
Southbound Left – Harlem Road	B(17.7)	C(34.2)	B(18.0)	C(34.2)	B(18.0)	D(37.9)	B(18.5)	D(38.4)	B(19.0)	D(42.3)
Southbound Thru – Harlem Road	A(8.8)	A(8.1)	A(8.8)	A(8.1)	A(8.7)	A(8.1)	A(8.2)	A(8.1)	A(8.3)	A(8.0)
Overall LOS/Delay (sec/veh)	C(21.2)	C(25.8)	C(21.2)	C(25.9)	C(22.2)	C(27.6)	C(27.7)	C(27.5)	C(24.4)	C(29.0)
Maple Road/Proposed Driveway (U)										
Westbound Left – Maple Road	B(10.8)	B(13.3)	B(10.7)	B(13.7)	B(11.3)	C(18.5)	C(17.7)	B(13.5)	B(12.4)	C(16.6)
Northbound Left – Proposed Driveway	C(15.7)	C(20.9)	C(16.2)	C(21.0)	C(21.0)	F(80.7)	D(29.2)	F(*)	C(21.3)	E(41.6)
Sheridan Drive/Proposed Access Driveway (U)										
Eastbound Left – Sheridan Drive	Adjacent Fenwick	Adjacent Fenwick	Adjacent Fenwick	Adjacent Fenwick	Adjacent Fenwick	Adjacent Fenwick	Adjacent Fenwick	Adjacent Fenwick	Adjacent Fenwick	Adjacent Fenwick
Southbound Left – Proposed Driveway	C(15.4)	C(17.3)	C(15.4)	C(17.3)	C(16.8)	E(45.2)	C(16.8)	E(45.2)	C(16.8)	E(45.2)
Southbound Right – Proposed Driveway	E(37.7)	E(47.4)	E(37.7)	E(47.4)	E(40.0)	F(*)	E(40.0)	F(*)	E(40.0)	F(*)
Southbound Left – Proposed Driveway	C(18.3)	C(20.7)	C(18.3)	C(20.7)	C(20.4)	E(47.2)	C(20.4)	E(47.2)	C(20.4)	E(47.2)
Sheridan Drive/Proposed Access Driveway (U)										
Eastbound Left – Sheridan Drive	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Southbound Left – Proposed Driveway	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Frankhauser Road/Proposed Access Driveway (U)										
Eastbound Left – Sheridan Drive	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Westbound Left – Proposed Driveway	A(9.1)	A(9.4)	A(9.5)	A(9.8)	A(9.4)	B(10.9)	A(9.8)	B(10.9)	A(9.5)	B(10.7)
North Forest Road/Proposed Access Driveway (U)										
Eastbound Left – Proposed Driveway	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	C(18.8)	F(51.2)
Northbound Left – North Forest Road	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	A(0.5)	A(1.4)

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
 1: Maple Road & Millersport Hwy SB
 4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (vph)	18	571	791	307	27	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	0	0	0	0	0
Storage Lanes	1	1	1	1	1	1
Taper Length (ft)	35	100	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00
Flt Protected	0.950			0.850	0.850	
Satd. Flow (prot)	1770	3539	3539	1583	1770	1583
Flt Permitted	0.339			0.950		
Satd. Flow (perm)	631	3539	3539	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)		45	45		30	106
Link Speed (mph)		555	654		281	
Link Distance (ft)		8.4	9.9		6.4	
Travel Time (s)		0.91	0.96	0.96	0.78	0.78
Peak Hour Factor		20	627	824	320	35
Adj. Flow (vph)		20	627	824	320	35
Shared Lane Traffic (%)						
Lane Group Flow (vph)		20	627	824	320	35
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Right	Left	Right
Median Width(ft)		12	12	12	12	
Link Offset(ft)		0	0	0	0	
Crosswalk Width(ft)		16	16	16	16	
Two way Left Turn Lane		Yes				
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	2	2	9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94	94	94			
Detector 2 Size(ft)	6	6	6			
Detector 2 Type	Ch+Ex	Ch+Ex	Ch+Ex			
Detector 2 Channel						
Detector 2 Extend (s)	0.0	0.0	0.0			
Turn Type	Perm			pm+ov		Perm
Protected Phases	2	6	6	4	4	
Permitted Phases	2	2	6	4	4	4
Detector Phase	2	2	6	4	4	4

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
 1: Maple Road & Millersport Hwy SB
 4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	1.0	1.0	1.0
Minimum Split (s)	9.1	9.1	9.1	6.2	6.2	6.2
Total Split (s)	40.0	40.0	40.0	30.0	30.0	30.0
Total Split (%)	57.1%	57.1%	57.1%	42.9%	42.9%	42.9%
Maximum Green (s)	34.9	34.9	34.9	25.4	25.4	25.4
Yellow Time (s)	3.9	3.9	3.9	3.2	3.2	3.2
All-Red Time (s)	1.2	1.2	1.2	1.4	1.4	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	4.6	4.6	4.6
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Min	C-Min	C-Min	None	None	None
Act Effct Green (s)	52.8	52.8	52.8	7.0	7.5	7.5
Actuated g/C Ratio	0.75	0.75	0.75	1.00	0.11	0.11
v/c Ratio	0.04	0.23	0.31	0.20	0.18	0.40
Control Delay	2.9	3.0	5.4	0.3	29.9	11.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.9	3.0	5.4	0.3	29.9	11.4
LOS	A	A	A	A	C	B
Approach Delay						
Approach LOS	A	A	A	A	B	B
Intersection Summary						
Area Type:	Other					
Cycle Length:	70					
Offset:	5 (7%), Referenced to phase 2:EBTL and 6:WBT. Start of Green					
Natural Cycle:	40					
Control Type:	Actuated-Coordinated					
Maximum v/c Ratio:	0.40					
Intersection Signal Delay:	4.5					
Intersection LOS:	A					
Intersection Capacity Utilization:	35.1%					
Analysis Period (min):	15					



Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
2: Maple Road & Millersport Hwy NB

4/24/2014

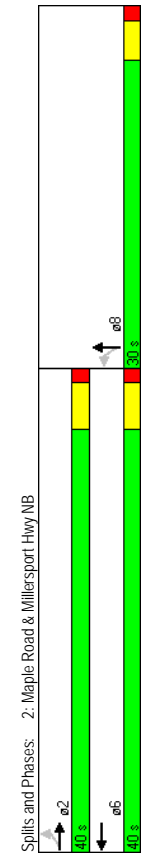
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations											
Volume (vph)	42	555	0	0	951	53	147	1	465	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	0	0	0	0	0	0	0	0	0
Storage Lanes	1	0	0	0	0	1	0	0	0	0	0
Taper Length (ft)	50	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.950				0.992		0.950		0.850		
Satd. Flow (prot)	1770	3539	0	0	3511	0	1770	1583	0	0	0
Flt Permitted	0.207				0.950		0.950				
Right Turn on Red	386	3539	0	0	3511	0	1770	1583	0	0	0
Satd. Flow (RTOR)			Yes		Yes		Yes	Yes			Yes
Link Speed (mph)	45	45			11		196				30
Link Distance (ft)	654	1770			26.8		319				263
Travel Time (s)	9.9	9.9			7.3		7.3				6.0
Peak Hour Factor	0.85	0.85	0.85	0.93	0.93	0.93	0.93	0.93	0.93	0.92	0.92
Adj. Flow (vph)	49	653	0	0	1023	57	158	1	500	0	0
Shared Lane Traffic (%)											
Lane Group Flow (vph)	49	653	0	0	1080	0	158	501	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Left	Right	Left	Right
Median Width(ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9	15	9	15	9	15
Number of Detectors	1	2			2		1	2			2
Detector Template	Left	Thru			Thru		Left	Thru			Thru
Leading Detector (ft)	20	100			100		20	100			100
Trailing Detector (ft)	0	0			0		0	0			0
Detector 1 Position(ft)	0	0			0		0	0			0
Detector 1 Size(ft)	20	6			6		20	6			6
Detector 1 Type	CI+EX	CI+EX			CI+EX		CI+EX	CI+EX			CI+EX
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0			0.0
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0			0.0
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0			0.0
Detector 2 Position(ft)	94				94						94
Detector 2 Size(ft)	6				6						6
Detector 2 Type	CI+EX				CI+EX						CI+EX
Detector 2 Channel											
Detector 2 Extend (s)	0.0	0.0			0.0		0.0	0.0			0.0
Turn Type	Perm				Perm		Perm				Perm
Protected Phases	2				6		8				8
Permitted Phases	2				6		8				8
Detector Phase	2				6		8				8

Lanes, Volumes, Timings SRF & Associates Alternative 1 Page 3

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
2: Maple Road & Millersport Hwy NB

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	1.0	1.0			4.0		1.0	1.0			1.0
Minimum Split (s)	6.1	6.1			9.1		6.2	6.2			6.2
Total Split (s)	40.0	40.0	0.0	0.0	40.0	0.0	30.0	30.0	0.0	0.0	40.0
Total Split (%)	57.1%	57.1%	0.0%	0.0%	57.1%	0.0%	42.9%	42.9%	0.0%	0.0%	57.1%
Maximum Green (s)	34.9	34.9			34.9		25.4	25.4			34.9
Yellow Time (s)	3.9	3.9			3.9		3.2	3.2			3.9
All-Red Time (s)	1.2	1.2			1.2		1.4	1.4			1.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	4.0	4.0	5.1	4.0	4.6	4.6	4.0	4.0	4.0
Lead-Lag											
Lead-Lag Optimize?											
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0			3.0
Recall Mode	C-Min	C-Min			C-Min		None	None			None
Act Effct Green (s)	40.0	40.0			40.0		20.3	20.3			40.0
Actuated g/C Ratio	0.57	0.57			0.57		0.29	0.29			0.57
v/c Ratio	0.22	0.32			0.54		0.31	0.84			0.29
Control Delay	14.0	9.9			11.7		19.3	26.3			11.7
Queue Delay	0.0	0.0			0.0		0.0	0.0			0.0
Total Delay	14.0	9.9			11.7		19.3	26.3			11.7
LOS	B	A			B		B	C			C
Approach Delay											
Approach LOS	B	B			B		B	C			C
Intersection Summary											
Area Type:	Other										
Cycle Length:	70										
Offset:	5 (7%), Referenced to phase 2:EBTL and 6:WBT, Start of Green										
Natural Cycle:	45										
Control Type:	Actuated-Coordinated										
Maximum v/c Ratio:	0.84										
Intersection Signal Delay:	14.7										
Intersection LOS:	B										
Intersection Capacity Utilization:	71.8%										
Analysis Period (min):	15										



Splits and Phases: 2: Maple Road & Millersport Hwy NB

Lanes, Volumes, Timings SRF & Associates Alternative 1 Page 4

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
4: Maple Road & Donna Lea Blvd

4/24/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔↔	↔↔	↔↔	↔↔	↔↔
Volume (vph)	930	6	13	1008	24	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	50	0	0	0	0
Storage Lanes	0	1	0	1	0	0
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Flt Protected	0.999		0.950		0.904	
Flt Permitted			0.950		0.986	
Satd. Flow (prot)	3536	0	1770	3539	1660	0
Satd. Flow (perm)	3536	0	1770	3539	1660	0
Link Speed (mph)	45		45		30	
Link Distance (ft)	1106		1002		355	
Travel Time (s)	16.8		15.2		8.1	
Peak Hour Factor	0.79	0.79	0.87	0.87	0.76	0.76
Adj. Flow (vph)	1177	8	15	1159	32	80
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1185	0	15	1159	112	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12		12		12	
Link Offset(ft)	0		0		0	
Crosswalk Width(ft)	16		16		16	
Two way Left Turn Lane	Yes		Yes		Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15	15	15	15	9
Sign Control	Free	Free	Free	Free	Stop	Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	39.6%					
Analysis Period (min)	15					
ICU Level of Service:	A					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
4: Maple Road & Donna Lea Blvd

4/24/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔↔	↔↔	↔↔	↔↔	↔↔
Volume (veh/h)	930	6	13	1008	24	61
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%		0%		0%	
Peak Hour Factor	0.79	0.79	0.87	0.87	0.76	0.76
Hourly flow rate (vph)	1177	8	15	1159	32	80
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLT		TWLT		2	
Median storage (veh)	2		2		2	
Upstream signal (ft)	1106					
pX, platoon unblocked			0.87		0.87	0.87
VC, conflicting volume			1185		1790	592
VC1, stage 1 conf vol					1181	
VC2, stage 2 conf vol					609	
vCu, unblocked vol			904		1603	220
IC, single (s)			4.1		6.8	6.9
IC, 2 stage (s)					5.8	
IF (s)			2.2		3.5	3.3
p0 queue free %			98		88	88
cM capacity (veh/h)			648		265	679
Direction, Lane #						
Volume Total	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Left	785	400	15	579	579	112
Volume Right	0	0	15	0	0	32
cSH	1700	1700	648	1700	1700	472
Volume to Capacity	0.46	0.24	0.02	0.34	0.34	0.24
Queue Length 95th (ft)	0	0	2	0	0	23
Control Delay (s)	0.0	0.0	10.7	0.0	0.0	15.0
Lane LOS			B			B
Approach Delay (s)	0.0		0.1			15.0
Approach LOS			B			B
Intersection Summary						
Average Delay	0.7					
Intersection Capacity Utilization	39.6%					
ICU Level of Service	A					
Analysis Period (min)	15					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
5: Maple Road & Audubon Golf Club

4/24/2014



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	1	991	4	1	1033	2	13	0	0	3	1
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vpph)	100	0	50	0	50	0	0	0	0	0	0
Storage Length (ft)	1	0	1	0	1	0	0	0	0	0	0
Storage Lanes	25	25	25	25	25	25	25	25	25	25	25
Taper Length (ft)	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.999						0.976				
Flt Protected	0.950			0.950			0.960				0.950
Satd. Flow (prot)	1770	3536	0	1770	3539	0	1745	0	1745	0	1770
Flt Permitted	0.950			0.950			0.960				0.950
Satd. Flow (perm)	1770	3536	0	1770	3539	0	1745	0	1745	0	1770
Link Speed (mph)	45	6.8		45			30		30		30
Link Distance (ft)	446			556			469		469		111
Travel Time (s)	6.8			8.4			10.7		10.7		2.5
Adj. Flow (vph)	1	1077	4	1	1123	2	14	0	3	1	0
Shared Lane Traffic (%)											
Lane Group Flow (vph)	1	1081	0	1	1125	0	0	17	0	0	1
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Right
Median Width (ft)	12			12			0		0		0
Link Offset (ft)	0			0			0		0		0
Crosswalk Width (ft)	16			16			16		16		16
Two way Left Turn Lane	Yes			Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9			15		9		15
Sign Control	Free			Free			Stop		Stop		Stop

Intersection Summary											
Area Type:	Other										
Control Type:	Unsignalized										
Intersection Capacity Utilization	38.6%										
Analysis Period (min)	15										
ICU Level of Service:	A										

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
5: Maple Road & Audubon Golf Club

4/24/2014



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	1	991	4	1	1033	2	13	0	3	1	0
Volume (veh/h)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Sign Control	Free			Free			Stop		Stop		Stop
Grade	0%			0%			0%		0%		0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	1077	4	1	1123	2	14	0	3	1	0
Pedestrians											
Lane Width (ft)											
Walking Speed (ft/s)											
Percent Blockage											
Right turn flare (veh)											
Median type	TWLTL										
Median storage (veh)	2										
Upstream signal (ft)	2										
pX, platoon unblocked											
vC, conflicting volume	1125			1082			1645	2209	541	1670	2210
vC1, stage 1 conf vol							1082	1082	1126	1126	1126
vC2, stage 2 conf vol							564	1127	544	1084	1084
vCu, unblocked vol	1125			1082			1645	2209	541	1670	2210
IC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5
IC, 2 stage (s)							6.5	5.5	6.5	6.5	5.5
IF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0
p0 queue free %	100			100			93	100	99	99	100
cM capacity (veh/h)	617			641			209	199	486	199	470

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	1	718	363	1	749	376	17	1
Volume Left	1	0	0	1	0	0	14	1
Volume Right	0	0	4	0	0	2	3	0
cSH	617	1700	1700	641	1700	1700	234	199
Volume to Capacity	0.00	0.42	0.21	0.00	0.44	0.22	0.07	0.01
Queue Length 95th (ft)	0	0	0	0	0	0	6	0
Control Delay (s)	10.8	0.0	0.0	10.6	0.0	0.0	21.6	23.2
Lane LOS	B			B			C	C
Approach Delay (s)	0.0			0.0			21.6	23.2
Approach LOS				C			C	C

Intersection Summary		
Average Delay	0.2	
Intersection Capacity Utilization	38.6%	
Analysis Period (min)	15	
ICU Level of Service	A	

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
6: Maple Road & North Forest Road

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	83	806	77	250	768	90	90	230	185	123	356
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	415	220	315	220	150	125	220	250	250	250	250
Storage Lanes	1	1	1	1	1	1	1	1	1	1	1
Taper Length (ft)	90	115	60	25	95	25	95	25	90	90	25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Flt Permitted	0.950	0.850	0.950	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1863	1583	1770	1863
Flt Permitted	0.282	0.106	0.282	0.106	0.219	0.219	0.355	0.355	0.355	0.355	0.355
Satd. Flow (perm)	525	3539	1583	197	3539	1583	408	1863	1583	661	1863
Right Turn on Red	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes	Yes	Yes
Satd. Flow (RTOR)	86	86	86	45	45	45	35	35	59	35	35
Link Speed (mph)	1705	820	12.4	10.3	11.8	11.8	11.8	11.8	11.8	11.8	11.8
Link Distance (ft)	25.8	12.4	10.3	10.3	11.8	11.8	11.8	11.8	11.8	11.8	11.8
Travel Time (s)	0.90	0.90	0.95	0.95	0.95	0.90	0.90	0.90	0.90	0.80	0.80
Peak Hour Factor	92	896	86	263	808	95	100	256	206	154	445
Adj. Flow (vph)	92	896	86	263	808	95	100	256	206	154	445
Shared Lane Traffic (%)	No	No	No	No	No	No	No	No	No	No	No
Lane Group Flow (vph)	No	No	No	No	No	No	No	No	No	No	No
Enter Blocked Intersection	Left	Left	Left	Right	Right	Left	Left	Left	Right	Left	Right
Lane Alignment	Left	Left	Left	Left	Left	Left	Left	Left	Left	Left	Right
Median Width (ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset (ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width (ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	2	1	2	1	2	1	1	2
Number of Detectors	1	2	1	1	1	1	1	2	1	1	2
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru
Leading Detector (ft)	20	100	20	100	20	100	20	100	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size (ft)	20	6	20	20	6	20	20	6	20	20	6
Detector 1 Type	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 1 Channel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position (ft)	94	94	94	94	94	94	94	94	94	94	94
Detector 2 Size (ft)	6	6	6	6	6	6	6	6	6	6	6
Detector 2 Type	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 2 Channel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Extend (s)	5	2	3	1	6	7	3	8	1	7	4
Turn Type	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt
Protected Phases	5	2	3	1	6	7	3	8	1	7	4
Permitted Phases	2	2	2	6	6	6	8	8	4	4	4
Detector Phase	5	2	3	1	6	7	3	8	1	7	4

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
6: Maple Road & North Forest Road

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Minimum Initial (s)	1.0	4.0	1.0	1.0	4.0	1.0	1.0	4.0	1.0	1.0	4.0
Minimum Split (s)	7.0	35.0	7.0	7.0	35.0	7.0	7.0	35.0	7.0	7.0	35.0
Total Split (s)	13.0	45.0	10.0	23.0	55.0	15.0	10.0	37.0	23.0	15.0	42.0
Total Split (%)	10.8%	37.5%	8.3%	19.2%	45.8%	12.5%	8.3%	30.8%	19.2%	12.5%	35.0%
Maximum Green (s)	7.0	39.0	4.0	17.0	49.0	9.0	4.0	31.0	17.0	9.0	36.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0	0	0	0
Act Effct Green (s)	39.5	32.5	42.8	53.1	40.5	55.5	28.9	24.8	45.8	38.5	29.6
Actuated g/C Ratio	0.37	0.31	0.40	0.50	0.38	0.53	0.27	0.23	0.43	0.36	0.28
v/c Ratio	0.33	0.82	0.12	0.82	0.60	0.11	0.61	0.59	0.29	0.46	0.85
Control Delay	19.0	41.8	5.2	46.2	28.3	13.8	44.4	43.0	15.1	28.9	53.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.0	41.8	5.2	46.2	28.3	13.8	44.4	43.0	15.1	28.9	53.6
LOS	B	D	A	D	C	B	D	D	B	C	D
Approach Delay	36.9	D	A	D	C	B	D	D	B	C	D
Approach LOS	D	D	A	D	C	B	D	D	B	C	D
Intersection Summary	Other										
Area Type	Other										
Cycle Length	120										
Actuated Cycle Length	105.7										
Natural Cycle	85										
Control Type	Actuated-Uncoordinated										
Maximum v/c Ratio	0.85										
Intersection Signal Delay	34.8										
Intersection Capacity Utilization	79.9%										
Analysis Period (min)	15										



Splits and Phases: 6: Maple Road & North Forest Road
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
7: Sheridan Drive & Mill Street

4/24/2014

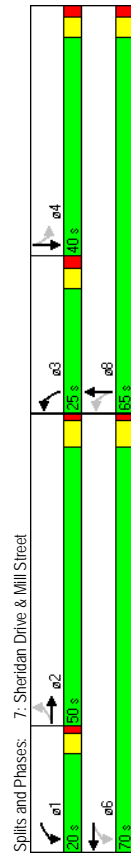
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	5	1287	124	220	980	9	101	21	125	30	146
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	100	0	150	0	40	0	75	0	75	0	0
Storage Length (ft)	1	0	1	0	1	0	1	0	1	0	0
Storage Lanes	65	25	60	25	25	25	25	25	25	25	25
Taper Length (ft)	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.987		0.999		0.872		0.950		0.950		0.986
Flt Protected	0.950		0.950		0.950		0.950		0.950		0.950
Satd. Flow (prot)	1770	3493	0	1770	3536	0	1770	1624	0	1770	1837
Flt Permitted	0.257		0.080		0.234		0.234		0.598		0.598
Satd. Flow (perm)	479	3493	0	149	3536	0	436	1624	0	1114	1837
Right Turn on Red			No		Yes		Yes	No		No	Yes
Satd. Flow (RTOR)			1								4
Link Speed (mph)	45		45		45		30		30		30
Link Distance (ft)	2782		977		838		362		362		82
Travel Time (s)	42.2		14.8		19.0		8.2		8.2		8.2
Peak Hour Factor	0.86	0.86	0.89	0.89	0.89	0.89	0.56	0.56	0.56	0.61	0.61
Adj. Flow (vph)	6	1497	144	247	1101	10	180	38	223	49	239
Shared Lane Traffic (%)											25
Lane Group Flow (vph)	6	1641	0	247	1111	0	180	261	0	49	264
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset(ft)	0		0		0		0		0		0
Crosswalk Width(ft)	16		16		16		16		16		16
Two way Left Turn Lane	Yes		Yes		Yes		Yes		Yes		Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9	15	9	15	9	15
Number of Detectors	1	2	1	2	1	2	1	2	1	2	1
Detector Template	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left
Leading Detector (ft)	20	100	20	100	20	100	20	100	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	6	20	6	20	6	20	6	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94	0.0	94	0.0	94	0.0	94	0.0	94	0.0	94
Detector 2 Size(ft)	6	6	6	6	6	6	6	6	6	6	6
Detector 2 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 2 Channel											
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm		pm+pt		pm+pt		pm+pt		Perm		Perm
Protected Phases	2	2	6	1	6	3	8	8	4	4	4
Permitted Phases	2	2	6	1	6	3	8	8	4	4	4
Detector Phase	2	2	6	1	6	3	8	8	4	4	4

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
7: Sheridan Drive & Mill Street

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase	4.0	4.0	1.0	4.0	4.0	1.0	4.0	4.0	4.0	4.0	4.0
Minimum Initial (s)	28.3	28.3	6.2	28.3	6.2	28.3	6.2	34.2	34.2	34.2	34.2
Minimum Split (s)	50.0	50.0	0.0	20.0	70.0	0.0	25.0	65.0	0.0	40.0	40.0
Total Split (s)	37.0%	37.0%	0.0%	14.8%	51.9%	0.0%	18.5%	48.1%	0.0%	29.6%	29.6%
Total Split (%)	44.5	44.5	15.7	64.5	19.8	59.8	34.8	34.8	34.8	34.8	34.8
Maximum Green (s)	4.3	4.3	3.2	4.3	3.2	4.3	3.2	3.2	3.2	3.2	3.2
Yellow Time (s)	1.2	1.2	1.1	1.2	1.1	1.2	2.0	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	5.5	5.5	4.0	4.3	5.5	4.0	5.2	5.2	4.0	5.2	5.2
Total Lost Time (s)	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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
Recall Mode	Max	Max	None	Max	None	Max	None	None	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0	15.0	15.0	15.0	15.0	22.0	22.0	22.0	22.0	22.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0	0	0	0
Act Effct Green (s)	45.4	45.4	66.1	64.9	40.7	40.7	40.7	40.7	21.6	21.6	21.6
Actuated g/C Ratio	0.39	0.39	0.57	0.56	0.35	0.35	0.35	0.35	0.19	0.19	0.19
v/c Ratio	0.03	1.20	0.83	0.56	0.58	0.46	0.58	0.46	0.24	0.24	0.77
Control Delay	27.4	132.4	53.1	19.3	34.3	31.5	34.3	31.5	43.4	59.7	59.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.4	132.4	53.1	19.3	34.3	31.5	34.3	31.5	43.4	59.7	59.7
LOS	C	F	D	B	C	C	C	C	D	D	E
Approach Delay	132.1	F	25.5	C	32.6	C	57.2	E			
Approach LOS											
Intersection Summary											
Area Type:	Other										
Cycle Length:	135										
Actuated Cycle Length:	116.4										
Natural Cycle:	130										
Control Type:	Semi Act-Uncoordinated										
Maximum v/c Ratio:	1.20										
Intersection Signal Delay:	75.7										
Intersection Capacity Utilization:	82.7%										
Analysis Period (min):	15										



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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
8: Sheridan Drive & North Forest Road

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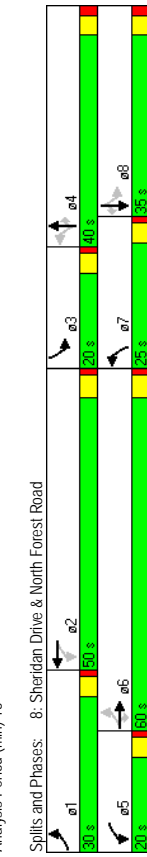
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	92	1304	205	181	1031	19	212	340	23	11	437
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	405	170	260	0	180	0	180	265	180	200	200
Storage Lanes	1	1	1	0	1	0	1	1	1	1	1
Taper Length (ft)	200	1	25	200	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95
Flt	0.850	0.850	0.997				0.850				0.850
Flt Protected	0.950		0.950		0.950		0.950			0.950	
Satd. Flow (prot)	1770	3539	1583	1770	3529	0	1770	1863	1583	1770	3539
Flt Permitted	0.124		0.067		0.067		0.201			0.480	
Satd. Flow (perm)	231	3539	1583	125	3529	0	374	1863	1583	894	3539
Right Turn on Red	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Satd. Flow (RTOR)	99		99		1		1		26		334
Link Speed (mph)	45		45		45		40		40		35
Link Distance (ft)	1439		2219		354		547		354		354
Travel Time (s)	21.8		33.6		6.9		9.3		6.9		6.9
Peak Hour Factor	0.95	0.95	0.95	0.92	0.92	0.92	0.90	0.90	0.90	0.84	0.84
Adj. Flow (vph)	97	1373	216	197	1121	21	236	378	26	13	520
Shared Lane Traffic (%)											
Lane Group Flow (vph)	97	1373	216	197	1142	0	236	378	26	13	520
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Left	Right	Left	Right
Median Width (ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset (ft)	0		0		0		0		0		0
Crosswalk Width (ft)	16		16		16		16		16		16
Two way Left Turn Lane	Yes		Yes		Yes		Yes		Yes		Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	1	2	9	15	1	2	9	15
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru
Leading Detector (ft)	20	100	20	20	100	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size (ft)	20	6	20	20	6	20	6	20	20	6	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position (ft)	94		94		94		94		94		94
Detector 2 Size (ft)	6		6		6		6		6		6
Detector 2 Type	CI+EX		CI+EX		CI+EX		CI+EX		CI+EX		CI+EX
Detector 2 Channel											
Detector 2 Extend (s)	0.0		0.0		0.0		0.0		0.0		0.0
Turn Type	pm+pt	Perm	pm+pt	pm+pt	Perm	pm+pt	Perm	pm+pt	Perm	pm+pt	Perm
Protected Phases	1	6	5	2	7	4	3	8			
Permitted Phases	6	6	6	2	4	4	4	8	8	8	8
Detector Phase	1	6	6	5	2	7	4	4	4	3	8

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
8: Sheridan Drive & North Forest Road

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.3	27.9	27.9	8.3	27.9	8.3	27.9	21.0	27.2	27.2	8.3
Total Split (s)	30.0	60.0	60.0	20.0	50.0	0.0	25.0	40.0	40.0	20.0	35.0
Total Split (%)	21.4%	42.9%	42.9%	14.3%	35.7%	0.0%	17.9%	28.6%	28.6%	14.3%	25.0%
Maximum Green (s)	25.7	54.9	54.9	15.7	44.9		20.7	34.9	34.9	15.7	29.9
Yellow Time (s)	3.2	3.9	3.9	3.2	3.9		3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.1	1.2	1.1	1.2	1.1		1.1	1.9	1.1	1.1	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.3	5.1	5.1	4.3	5.1		4.3	5.1	5.1	4.3	5.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	None	Max	None		None	None	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0	15.0	15.0	15.0		15.0	15.0	15.0	15.0	15.0
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0	0	0	0
Act Effct Green (s)	65.2	55.2	55.2	73.8	60.0		49.2	44.2	44.2	32.5	25.5
Actuated G/C Ratio	0.49	0.42	0.42	0.56	0.45		0.37	0.33	0.33	0.25	0.19
v/c Ratio	0.44	0.93	0.30	0.81	0.71		0.70	0.61	0.05	0.05	0.76
Control Delay	21.7	49.5	16.0	57.3	33.6		41.8	42.7	11.7	27.5	58.8
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	21.7	49.5	16.0	57.3	33.6		41.8	42.7	11.7	27.5	58.8
LOS	C	D	B	E	C		D	D	B	C	E
Approach Delay	43.6		37.1		D		D		D		D
Approach LOS	D		D		D		D		D		D
Intersection Summary	Other										
Area Type:	Other										
Cycle Length:	140										
Actuated Cycle Length:	132.2										
Natural Cycle:	105										
Control Type:	Actuated-Uncoordinated										
Maximum v/c Ratio:	0.93										
Intersection Signal Delay:	40.5										
Intersection Capacity Utilization:	85.6%										
Analysis Period (min):	15										



Spills and Phases: 8: Sheridan Drive & North Forest Road
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
10: Sheridan Drive & Fenwick Road

4/24/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔↔	↔↔	↔↔	↔↔	↔↔
Volume (vph)	1605	6	4	1538	16	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	75	0	0	0	0
Storage Lanes	0	1	0	1	0	0
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Flt Protected	0.999		0.950	0.950	0.951	
Flt Permitted	3536	0	1770	3539	1717	0
Satd. Flow (perm)	3536	0	1770	3539	1717	0
Link Speed (mph)	45		45	30		
Link Distance (ft)	635		229	278		
Travel Time (s)	9.6		3.5	6.3		
Peak Hour Factor	0.88	0.88	0.90	0.90	0.69	0.69
Adj. Flow (vph)	1824	7	4	1709	23	13
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1831	0	4	1709	36	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12		12	12		12
Link Offset(ft)	0		0	0		0
Crosswalk Width(ft)	16		16	16		16
Two way Left Turn Lane	Yes		Yes			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15	15	15	15	9
Sign Control	Free	Free	Free	Free	Stop	Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	54.6%					
Analysis Period (min)	15					
ICU Level of Service:	A					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
10: Sheridan Drive & Fenwick Road

4/24/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔↔	↔↔	↔↔	↔↔	↔↔
Volume (veh/h)	1605	6	4	1538	16	9
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%		0%	0%		0%
Peak Hour Factor	0.88	0.88	0.90	0.90	0.69	0.69
Hourly flow rate (vph)	1824	7	4	1709	23	13
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLT		TWLT			
Median storage (veh)	2		2			
Upstream signal (ft)	635					
pX, platoon unblocked		0.75		0.75		0.75
vC, conflicting volume		1831		2691		915
vC1, stage 1 conf vol				1827		
vC2, stage 2 conf vol				863		
vCu, unblocked vol		1434		2586		208
IC, single (s)		4.1		6.8		6.9
IC, 2 stage (s)				5.8		
IF (s)		2.2		3.5		3.3
p0 queue free %		99		82		98
cM capacity (veh/h)		351		126		596
Direction, Lane #						
EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	NB 2
1216	615	4	854	854	36	36
Volume Total		0	4	0	0	23
Volume Left		0	0	0	0	13
Volume Right		7	0	0	0	10
cSH		1700	1700	351	1700	176
Volume to Capacity		0.72	0.36	0.01	0.50	0.50
Queue Length 95th (ft)		0	0	1	0	0
Control Delay (s)		0.0	0.0	15.4	0.0	30.7
Lane LOS		C	C	C	D	D
Approach Delay (s)		0.0	0.0			
Approach LOS						
Intersection Summary						
Average Delay	0.3					
Intersection Capacity Utilization	54.6%					
ICU Level of Service	A					
Analysis Period (min)	15					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
11: Sheridan Drive & Frankhauser Road

4/24/2014

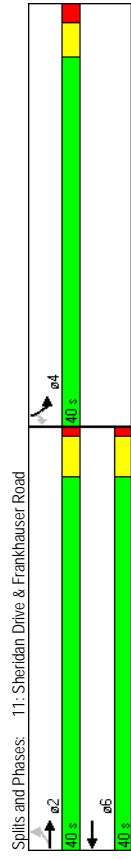
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (vph)	28	1564	1530	24	46	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105	0	0	0	0	50
Storage Lanes	1	0	0	1	1	1
Taper Length (ft)	65	25	25	25	25	25
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Flt Protected	0.950	0.998			0.850	
Satd. Flow (prot)	1770	3539	3532	0	1770	1583
Flt Permitted	0.122				0.950	
Satd. Flow (perm)	227	3539	3532	0	1770	1583
Right Turn on Red		Yes		Yes	Yes	Yes
Satd. Flow (RTOR)		2			7	
Link Speed (mph)	45	45	45	30	30	30
Link Distance (ft)	1014	635	635	825	825	825
Travel Time (s)	15.4	9.6	9.6	18.8	18.8	18.8
Peak Hour Factor	0.89	0.89	0.94	0.94	0.73	0.73
Adj. Flow (vph)	31	1757	1628	26	63	42
Shared Lane Traffic (%)						
Lane Group Flow (vph)	31	1757	1654	0	63	42
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Right
Median Width(ft)	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	2	2	9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Left	Right	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94	94	94	6	6	6
Detector 2 Size(ft)	6	6	6	6	6	6
Detector 2 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 2 Channel						
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm				Perm	
Protected Phases	2	2	6	4	4	4
Permitted Phases	2	2	6	4	4	4

Lanes, Volumes, Timings
SRF & Associates
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
11: Sheridan Drive & Frankhauser Road

4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	1.0	1.0
Minimum Split (s)	40.0	40.0	40.0	40.0	31.1	31.1
Total Split (s)	40.0	40.0	40.0	40.0	40.0	40.0
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Maximum Green (s)	35.2	35.2	35.2	35.2	34.9	34.9
Yellow Time (s)	3.9	3.9	3.9	3.9	3.2	3.2
All-Red Time (s)	0.9	0.9	0.9	0.9	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.8	4.8	4.8	4.8	5.1	5.1
Lead-Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0	15.0	15.0	19.0	19.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effct Green (s)	64.9	64.9	64.9	64.9	8.3	8.3
Actuated g/C Ratio	0.81	0.81	0.81	0.81	0.10	0.10
v/c Ratio	0.17	0.61	0.58	0.34	0.25	0.25
Control Delay	5.4	5.2	4.8	4.8	37.7	31.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.4	5.2	4.8	4.8	37.7	31.4
LOS	A	A	A	A	D	C
Approach Delay	5.2	4.8	4.8	4.8	35.2	31.4
Approach LOS	A	A	A	A	D	D
Intersection Summary	Other					
Area Type:	Other					
Cycle Length:	80					
Actuated Cycle Length:	80					
Offset:	76 (95%), Referenced to phase 2:EBTL and 6:WBT, Start of Green					
Natural Cycle:	80					
Control Type:	Actuated-Coordinator					
Maximum v/c Ratio:	0.61					
Intersection Signal Delay:	5.9					
Intersection Capacity Utilization:	54.8%					
Analysis Period (min):	15					



Lanes, Volumes, Timings
SRF & Associates
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
12: Sheridan Drive & I-290 NB

4/24/2014

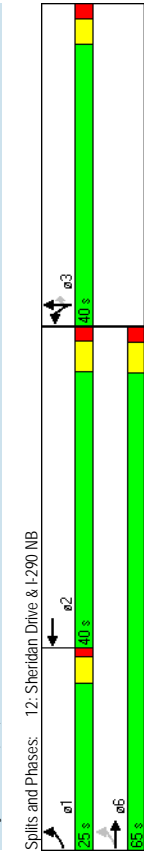
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	249	1402	0	0	1016	501	269	0	226	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	0	0	230	120	0	0	0	0	0
Storage Lanes	1	0	0	0	1	1	0	0	0	0	0
Taper Length (ft)	105	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.95	0.91	0.95	0.850	1.00	1.00
Flt Protected	0.950				0.950	0.972		0.937	0.850		
Satd. Flow (prot)	1770	5085	0	0	4831	0	1681	1544	1504	0	0
Flt Permitted	0.0%				0.950	0.972					
Satd. Flow (perm)	179	5085	0	0	4831	0	1681	1544	1504	0	0
Right Turn on Red			Yes			Yes			Yes		Yes
Satd. Flow (RTOR)		45			125				30		30
Link Speed (mph)		197			45				30		30
Link Distance (ft)		3.0			2.9				18.9		9.6
Travel Time (s)		0.94			0.94				0.88		0.92
Peak Hour Factor		2.65			1.491				0.88		0.92
Adj. Flow (vph)		265			1491				257		0
Shared Lane Traffic (%)									31%		
Lane Group Flow (vph)		265			1491				190		177
Enter Blocked Intersection		No			No				No		No
Lane Alignment		Left			Left				Right		Left
Median Width(ft)		12			12				12		12
Link Offset(ft)		0			0				0		0
Crosswalk Width(ft)		16			16				16		16
Two way Left Turn Lane											
Headway Factor		1.00			1.00				1.00		1.00
Turning Speed (mph)		15			9				15		15
Number of Detectors		1			2				1		2
Detector Template		Left			Thru				Left		Right
Leading Detector (ft)		20			100				20		20
Trailing Detector (ft)		0			0				0		0
Detector 1 Position(ft)		0			0				0		0
Detector 1 Size(ft)		20			6				20		20
Detector 1 Type		CI+EX			CI+EX				CI+EX		CI+EX
Detector 1 Channel											
Detector 1 Extend (s)		0.0			0.0				0.0		0.0
Detector 1 Queue (s)		0.0			0.0				0.0		0.0
Detector 1 Delay (s)		0.0			0.0				0.0		0.0
Detector 2 Position(ft)		94			94				94		94
Detector 2 Size(ft)		6			6				6		6
Detector 2 Type		CI+EX			CI+EX				CI+EX		CI+EX
Detector 2 Channel											
Detector 2 Extend (s)		0.0			0.0				0.0		0.0
Turn Type		pn+pt			custom				Perm		Perm
Protected Phases		1			2				3		3
Permitted Phases		6			2				3		3
Detector Phase		1			2				3		3

Lanes, Volumes, Timings
SRF & Associates
Alternative 1
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
12: Sheridan Drive & I-290 NB

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	1.0	4.0			4.0		4.0		4.0		4.0
Minimum Split (s)	6.2	33.9			27.8		29.0		29.0		29.0
Total Split (s)	25.0	65.0			40.0		40.0		40.0		40.0
Total Split (%)	23.8%	61.9%			38.1%		38.1%		38.1%		38.1%
Maximum Green (s)	20.7	59.1			34.2		34.8		34.8		34.8
Yellow Time (s)	3.2	3.9			3.9		3.2		3.2		3.2
All-Red Time (s)	1.1	2.0			1.9		2.0		2.0		2.0
Lost Time Adjust (s)	0.0	0.0			0.0		0.0		0.0		0.0
Total Lost Time (s)	4.3	5.9			5.8		5.2		5.2		5.2
Lead/Lag	Lead				Lag						
Lead-Lag Optimize?	Yes				Yes						
Vehicle Extension (s)	2.0	3.0			3.0		2.0		2.0		2.0
Recall Mode	None	C-Max			C-Max		None		None		None
Walk Time (s)	7.0				7.0						
Flash Dont Walk (s)	21.0				15.0						
Pedestrian Calls (#/hr)	0				0						
Act Effct Green (s)	78.2	76.6			58.9		17.3		17.3		17.3
Actuated g/C Ratio	0.74	0.73			0.56		0.16		0.16		0.16
v/c Ratio	0.78	0.40			0.58		0.71		0.68		0.65
Control Delay	34.1	6.3			16.7		54.8		46.2		44.2
Queue Delay	0.0	0.0			0.0		0.0		0.0		0.0
Total Delay	34.1	6.3			16.7		54.8		46.2		44.2
LOS	C	A			B		D		D		D
Approach Delay		10.5			16.7				48.6		
Approach LOS		B			B				D		



Intersection Summary
Area Type: Other
Cycle Length: 105
Actuated Cycle Length: 105
Offset: 37 (35%), Referenced to phase 2:WBT and 6:EBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 18.5
Intersection Capacity Utilization 67.1%
Analysis Period (min) 15
Spills and Phases: 12: Sheridan Drive & I-290 NB
σ1
σ2
σ3
σ4
σ5
σ6

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Alternative 1
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
13: Sheridan Drive & Harlem Road

4/24/2014

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔↔	↔↔	↔↔	↔↔
Volume (vph)	833	315	472	813	285
Ideal Flow (vphpl)	1900	1900	1900	1900	1900
Storage Length (ft)	0	215	0	140	0
Storage Lanes	1	1	2	2	2
Taper Length (ft)	230	100	100	100	25
Lane Util. Factor	0.95	1.00	0.97	0.95	0.88
Flt Protected	0.850				0.850
Satd. Flow (prot)	3539	1583	3433	3539	3433
Flt Permitted	0.950				0.950
Satd. Flow (perm)	3539	1583	3433	3539	3433
Right Turn on Red	No				Yes
Satd. Flow (RTOR)	45			45	35
Link Speed (mph)	314			413	338
Link Distance (ft)	4.8			6.3	6.6
Travel Time (s)	0.85	0.85	0.92	0.92	0.90
Peak Hour Factor	980	371	513	884	317
Adj. Flow (vph)	980	371	513	884	317
Lane Group Flow (vph)	No	No	No	No	No
Enter Blocked Intersection	Left	Right	Left	Left	Right
Lane Alignment	24	24	24	24	24
Median Width(ft)	0	0	0	0	0
Link Offset(ft)	16	16	16	16	16
Crosswalk Width(ft)	1.00	1.00	1.00	1.00	1.00
Headway Factor	9	15	15	15	9
Turning Speed (mph)	2	1	2	1	1
Number of Detectors	Thru	Right	Left	Thru	Left
Detector Template	100	20	20	100	20
Leading Detector (ft)	0	0	0	0	0
Trailing Detector (ft)	0	0	0	0	0
Detector 1 Position(ft)	6	20	20	6	20
Detector 1 Size(ft)	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 1 Type	Detector 1 Channel				
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94	
Detector 2 Size(ft)	6			6	
Detector 2 Type	Ch+Ex			Ch+Ex	
Detector 2 Channel	Detector 2 Extend (s)			0.0	
Turn Type	pm+ov	Prot		pm+ov	
Protected Phases	2	3	1	6	3
Permitted Phases	2	3	1	6	3
Detector Phase	2	3	1	6	3

Lanes, Volumes, Timings
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
13: Sheridan Drive & Harlem Road

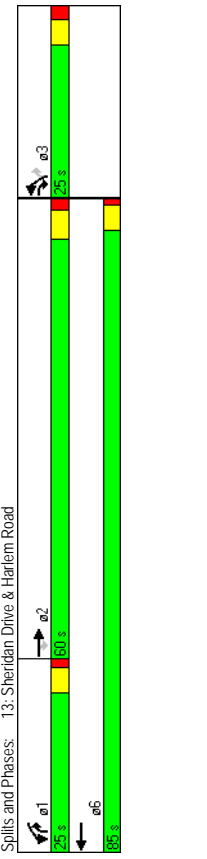
4/24/2014

Lane Group	EBT	WBL	WBT	NBL	NBR
Switch Phase	1.0	1.0	1.0	4.0	1.0
Minimum Initial (s)	30.5	6.2	5.3	32.3	6.2
Minimum Split (s)	60.0	25.0	25.0	85.0	25.0
Total Split (s)	54.5%	22.7%	22.7%	71.3%	22.7%
Total Split (%)	54.5%	22.7%	22.7%	71.3%	22.7%
Maximum Green (s)	3.9	3.2	3.2	3.2	3.2
Yellow Time (s)	1.6	2.0	1.1	2.0	1.1
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	5.5	5.2	4.3	4.3	5.2
Total Lost Time (s)	Lag	Lead	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0
Recall Mode	C-Max	None	None	None	None
Walk Time (s)	7.0			7.0	
Flash Dont Walk (s)	18.0			21.0	
Pedestrian Calls (#/hr)	0			0	
Act Effct Green (s)	59.7	79.7	20.8	86.0	14.5
Actuated g/C Ratio	0.54	0.72	0.19	0.78	0.13
v/c Ratio	0.51	0.32	0.79	0.32	0.70
Control Delay	17.9	6.6	51.9	4.1	54.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	17.9	6.6	51.9	4.1	54.1
LOS	B	A	D	A	D
Approach Delay	14.8			21.6	38.2
Approach LOS	B			C	D

Intersection Summary

Area Type:	Other
Cycle Length:	110
Actuated Cycle Length:	110
Offset:	24 (22%), Referenced to phase 2:EBT, Start of Green
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.82
Intersection Signal Delay:	24.4
Intersection Capacity Utilization:	59.8%
Analysis Period (min):	15
Intersection LOS:	C
ICU Level of Service:	B

Lanes, Volumes, Timings
SRF & Associates
Alternative 1
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
14: I-290 SB & Harlem Road

4/24/2014

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (vph)	298	691	452	21	384	370
Ideal Flow (vppf)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	0	0	330	0
Storage Lanes	1	1	0	0	1	0
Taper Length (ft)	25	25	25	25	75	25
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	3514	0	1770	3539
Flt Permitted	0.950				0.258	
Satd. Flow (perm)	1770	1583	3514	0	481	3539
Right Turn on Red	Yes	Yes	Yes	Yes	Yes	Yes
Satd. Flow (RTOR)	164	4				
Link Speed (mph)	30	35				35
Link Distance (ft)	333	250				456
Travel Time (s)	7.6	4.9				8.9
Peak Hour Factor	0.81	0.81	0.87	0.87	0.88	0.88
Adj. Flow (vph)	368	853	520	24	436	420
Shared Lane Traffic (%)						
Lane Group Flow (vph)	368	853	544	0	436	420
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12	12				12
Link Offset(ft)	0	0				0
Crosswalk Width(ft)	16	16				16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru	Left	Thru	
Leading Detector (ft)	20	20	100	20	100	
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	6	
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			CI+EX			CI+EX
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type		pm+ov			pm+pl	
Protected Phases	3	1	2	1	1	6
Permitted Phases	3	1	2	1	1	6
Detector Phase	3	1	2	1	1	6

Lanes, Volumes, Timings
SRF & Associates
Alternative 1
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
14: I-290 SB & Harlem Road

4/24/2014

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	9.2	30.6	9.2	21.0	
Total Split (s)	40.0	35.0	50.0	0.0	35.0	85.0
Total Split (%)	32.0%	28.0%	40.0%	0.0%	28.0%	68.0%
Maximum Green (s)	35.2	30.7	45.0		30.7	80.0
Yellow Time (s)	3.2	3.2	3.6		3.2	3.6
All-Red Time (s)	1.6	1.1	1.4		1.1	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.8	4.3	5.0	4.0	4.3	5.0
Lead/Lag		Lead	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Min	None	None	None
Walk Time (s)			10.0			
Flash Dont Walk (s)			15.0			
Pedestrian Calls (#/hr)			0			
Act Effct Green (s)	22.8	49.0	19.6		46.0	45.3
Actuated g/C Ratio	0.29	0.62	0.25		0.59	0.58
v/c Ratio	0.72	0.81	0.62		0.70	0.21
Control Delay	35.4	16.7	31.2		17.7	8.8
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	35.4	16.7	31.2		17.7	8.8
LOS	D	B	C		B	A
Approach Delay	22.3		31.2			13.3
Approach LOS	C		C			B
Intersection Summary						
Area Type:	Other					
Cycle Length:	125					
Actuated Cycle Length:	78.6					
Natural Cycle:	90					
Control Type:	Actuated-Uncoordinated					
Maximum v/c Ratio:	0.81					
Intersection Signal Delay:	21.2					
Intersection Capacity Utilization:	63.7%					
Analysis Period (min):	15					



Lanes, Volumes, Timings
SRF & Associates
Alternative 1
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
15: Maple Road & Proposed North Driveway 4/24/2014

	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	↔↔	↔↔	↔↔	↔↔	↔↔	↔↔	
Volume (vph)	977	15	20	1007	15	23	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0	2.25	0	150	0	150	
Storage Lanes	0	1	0	1	0	1	
Taper Length (ft)	25	25	25	25	25	25	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00	
Flt Protected	0.998		0.950		0.950	0.850	
Satd. Flow (prot)	3532	0	1770	3539	1770	1583	
Flt Permitted	0.950		0.950		0.950		
Satd. Flow (perm)	3532	0	1770	3539	1770	1583	
Link Speed (mph)	45		45		30		
Link Distance (ft)	1002		926		372		
Travel Time (s)	15.2		14.0		8.5		
Adj. Flow (vph)	1062	16	22	1095	16	25	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	1078	0	22	1095	16	25	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Left	Left	Right	
Median Width(ft)	12		12		12		
Link Offset(ft)	0		0		0		
Crosswalk Width(ft)	16		16		16		
Two way Left Turn Lane	Yes		Yes		Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	9	15	15		15	9	
Sign Control	Free	Free	Free	Free	Stop	Stop	
Intersection Summary							
Area Type:	Other						
Control Type:	Unsignalized						
Intersection Capacity Utilization	37.8%						
Analysis Period (min)	15						
	ICU Level of Service: A						

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
15: Maple Road & Proposed North Driveway 4/24/2014

	EBT	EBR	WBL	WBT	NBL	NBR	
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	↔↔	↔↔	↔↔	↔↔	↔↔	↔↔	
Volume (veh/h)	977	15	20	1007	15	23	
Sign Control	Free	Free	Free	Free	Stop	Stop	
Grade	0%		0%		0%		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	1062	16	22	1095	16	25	
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)						6	
Median type				TW/TL			
Median storage (veh)	2			2			
Upstream signal (ft)							
pX, platoon unblocked					1661	539	
vC, conflicting volume					1070		
vC1, stage 1 cont vol					591		
vC2, stage 2 cont vol					1661	539	
vCu, unblocked vol					4.1	6.8	6.9
IC, single (s)					5.8		
IC, 2 stage (s)					2.2	3.5	3.3
IF (s)					97	94	95
p0 queue free %					642	255	487
cM capacity (veh/h)							
Direction, Lane #							
	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	
Volume Total	708	370	22	547	547	41	
Volume Left	0	0	22	0	0	16	
Volume Right	0	16	0	0	0	25	
cSH	1700	1700	642	1700	1700	647	
Volume to Capacity	0.42	0.22	0.03	0.32	0.32	0.06	
Queue Length 95th (ft)	0	0	3	0	0	5	
Control Delay (s)	0.0	0.0	10.8	0.0	0.0	15.7	
Lane LOS			B			C	
Approach Delay (s)	0.0	0.2				15.7	
Approach LOS						C	
Intersection Summary							
Average Delay	0.4						
Intersection Capacity Utilization	37.8%						
Analysis Period (min)	15						
	ICU Level of Service: A						

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
17: Proposed Access Road & Frankhauser Road

4/24/2014

	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group	W					
Lane Configurations	10	2	50	2	0	67
Volume (vph)	1900	1900	1900	1900	1900	1900
Ideal Flow (vpph)	1.00	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.979		0.995			
Flt Protected	0.959					
Satd. Flow (prot)	1749	0	1853	0	0	1863
Flt Permitted	0.959					
Satd. Flow (perm)	1749	0	1853	0	0	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	200		825			244
Travel Time (s)	4.5		18.8			5.5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	2	54	2	0	73
Shared Lane Traffic (%)						
Lane Group Flow (vph)	13	0	56	0	0	73
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	15
Sign Control	Stop	Free	Free	Free	Free	Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	13.5%					
Analysis Period (min)	15					
ICU Level of Service A						

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
17: Proposed Access Road & Frankhauser Road

4/24/2014

	WBL	WBR	NBT	NBR	SBL	SBT
Movement	W					
Lane Configurations	10	2	50	2	0	67
Volume (veh/h)	1900	1900	1900	1900	1900	1900
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	2	54	2	0	73
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None		None			None
Median storage (veh)						
Upstream signal (ft)			825			
pX, platoon unblocked						
VC, conflicting volume	128	55			57	
VC1, stage 1 cont vol						
VC2, stage 2 cont vol						
vCu, unblocked vol	128	55			57	
IC, single (s)	6.4	6.2			4.1	
IC, 2 stage (s)						
IF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			100	
cM capacity (veh/h)	866	1011			1548	
Direction, Lane #						
	WB 1	NB 1	SB 1			
Volume Total	13	57	73			
Volume Left	11	0	0			
Volume Right	2	2	0			
cSH	887	1700	1548			
Volume to Capacity	0.01	0.03	0.00			
Queue Length 95th (ft)	1	0	0			
Control Delay (s)	9.1	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	9.1	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay	0.8					
Intersection Capacity Utilization	13.5%					
ICU Level of Service	A					
Analysis Period (min)	15					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
52: Sheridan Drive & Proposed Access Driveway

4/24/2014



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	33	1581	1504	25	21	38
Volume (veh/h)	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	75	0	0	0	0	0
Storage Length (ft)	1	0	1	1	1	1
Taper Length (ft)	25	0.95	0.95	0.95	1.00	1.00
Lane Util. Factor	0.950	0.998	0.950	0.950	0.850	0.950
Flt Protected	1770	3539	3532	0	1770	1583
Satd. Flow (prot)	0.950	0.950	0.950	0.950	0.950	0.950
Flt Permitted	1770	3539	3532	0	1770	1583
Satd. Flow (perm)	45	45	45	30	30	30
Link Speed (mph)	229	1439	432	432	432	432
Link Distance (ft)	3.5	21.8	9.8	9.8	9.8	9.8
Travel Time (s)	0.92	0.92	0.92	0.92	0.92	0.92
Peak Hour Factor	36	1718	1635	27	23	41
Adj. Flow (vph)	36	1718	1662	0	23	41
Shared Lane Traffic (%)	No	No	No	No	No	No
Lane Group Flow (vph)	Left	Left	Right	Left	Left	Right
Enter Blocked Intersection	12	12	12	12	12	12
Lane Alignment	0	0	0	0	0	0
Median Width (ft)	16	16	16	16	16	16
Link Offset (ft)	Yes	Yes	Yes	Yes	Yes	Yes
Crosswalk Width (ft)	1.00	1.00	1.00	1.00	1.00	1.00
Two way Left Turn Lane	15	Free	Free	Free	Stop	Stop
Headway Factor	Free	Free	Free	Free	Free	Free
Turning Speed (mph)	ICU Level of Service A	ICU Level of Service A	ICU Level of Service A	ICU Level of Service A	ICU Level of Service A	ICU Level of Service A
Sign Control	Analysis Period (min) 15	Analysis Period (min) 15	Analysis Period (min) 15	Analysis Period (min) 15	Analysis Period (min) 15	Analysis Period (min) 15
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	53.7%					
Analysis Period (min)	15					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
52: Sheridan Drive & Proposed Access Driveway

4/24/2014



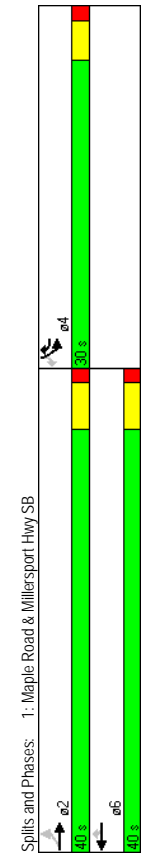
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	33	1581	1504	25	21	38
Volume (veh/h)	1900	1900	1900	1900	1900	1900
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	36	1718	1635	27	23	41
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLT	TWLT	TWLT	TWLT	TWLT	TWLT
Median storage (veh)	2	2	2	2	2	2
Upstream signal (ft)	864	864	864	864	864	864
pX, platoon unblocked					0.76	0.76
vC, conflicting volume	1662	2579	2579	831	1648	1648
vC1, stage 1 conf vol					931	931
vC2, stage 2 conf vol	1662	2448	2448	831	1648	1648
vCu, unblocked vol	4.1	6.8	6.8	6.9	5.8	5.8
IC, single (s)						
IC, 2 stage (s)	2.2	3.5	3.5	3.3	3.3	3.3
IF (s)	91	83	83	87	83	87
p0 queue free %	383	133	133	313	313	313
cM capacity (veh/h)						
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	36	859	859	1090	572	23
Volume Left	36	0	0	0	0	23
Volume Right	0	0	0	0	27	0
cSH	383	1700	1700	1700	133	313
Volume to Capacity	0.09	0.51	0.51	0.64	0.34	0.17
Queue Length 95th (ft)	8	0	0	0	0	15
Control Delay (s)	15.4	0.0	0.0	0.0	0.0	37.7
Lane LOS	C	E	E	C	E	C
Approach Delay (s)	0.3	0.0	0.0	0.0	25.2	0.3
Approach LOS	D	D	D	D	D	D
Intersection Summary						
Average Delay	0.6					
Intersection Capacity Utilization	53.7%					
Analysis Period (min)	15					
ICU Level of Service	A					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
 1: Maple Road & Millersport Hwy SB
 4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (vph)	29	954	861	230	56	174
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150			150	0	0
Storage Lanes	1			1	1	1
Taper Length (ft)	35			100	25	25
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Flt Protected	0.950			0.850	0.950	
Satd. Flow (prot)	1770	3539	3539	1583	1770	1583
Flt Permitted	0.287			0.950		
Satd. Flow (perm)	535	3539	3539	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)		45	45		30	90
Link Speed (mph)		555	654		281	
Link Distance (ft)		8.4	9.9		6.4	
Travel Time (s)		0.90	0.92	0.92	0.81	0.81
Peak Hour Factor		32	1060	936	250	69
Adj. Flow (vph)		32	1060	936	250	69
Shared Lane Traffic (%)						
Lane Group Flow (vph)		32	1060	936	250	69
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Right	Left	Right
Median Width(ft)		12	12	12	12	
Link Offset(ft)		0	0	0	0	0
Crosswalk Width(ft)		16	16	16	16	
Two way Left Turn Lane		Yes				
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94	94	94			
Detector 2 Size(ft)	6	6	6			
Detector 2 Type	Ch+Ex	Ch+Ex	Ch+Ex			
Detector 2 Channel						
Detector 2 Extend (s)	0.0	0.0	0.0			
Turn Type	Perm			pm+ov		Perm
Protected Phases		2	6	4	4	
Permitted Phases	2	2	6	6	4	4
Detector Phase	2	2	6	4	4	4

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
 1: Maple Road & Millersport Hwy SB
 4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	1.0	1.0	1.0
Minimum Split (s)	9.1	9.1	9.1	6.2	6.2	6.2
Total Split (s)	40.0	40.0	40.0	30.0	30.0	30.0
Total Split (%)	57.1%	57.1%	57.1%	42.9%	42.9%	42.9%
Maximum Green (s)	34.9	34.9	34.9	25.4	25.4	25.4
Yellow Time (s)	3.9	3.9	3.9	3.2	3.2	3.2
All-Red Time (s)	1.2	1.2	1.2	1.4	1.4	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	4.6	4.6	4.6
LeadLag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Min	C-Min	C-Min	None	None	None
Act Effct Green (s)	48.8	48.8	48.8	70.0	11.5	11.5
Actuated g/C Ratio	0.70	0.70	0.70	1.00	0.16	0.16
v/c Ratio	0.09	0.43	0.38	0.16	0.24	0.64
Control Delay	5.6	6.0	7.7	0.2	25.2	23.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.6	6.0	7.7	0.2	25.2	23.9
LOS	A	A	A	A	C	C
Approach Delay		6.0	6.1		24.2	
Approach LOS		A	A		C	
Intersection Summary						
Area Type:	Other					
Cycle Length:	70					
Actuated Cycle Length:	70					
Offset:	5 (7%), Referenced to phase 2:EBTL and 6:WBT, Start of Green					
Natural Cycle:	40					
Control Type:	Actuated-Coordinated					
Maximum v/c Ratio:	0.64					
Intersection Signal Delay:	8.1					
Intersection LOS:	A					
Intersection Capacity Utilization:	42.7%					
Analysis Period (min):	15					



Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
2: Maple Road & Millersport Hwy NB

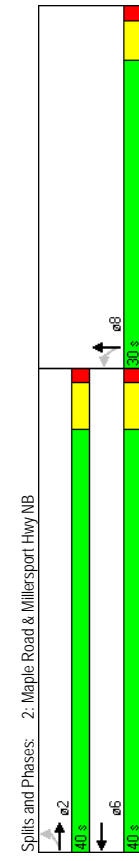
4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	97	914	0	0	999	26	91	0	465	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	0	0	0	0	0	0	0	0	0
Storage Lanes	1	0	0	0	0	0	1	0	0	0	0
Taper Length (ft)	50	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.950				0.996		0.950		0.850		
Satd. Flow (prot)	1770	3539	0	0	3525	0	1770	1583	0	0	0
Flt Permitted	0.154				0.950		0.950		0		
Satd. Flow (perm)	287	3539	0	0	3525	0	1770	1583	0	0	0
Right Turn on Red	Yes				Yes		Yes	Yes	Yes	Yes	Yes
Satd. Flow (RTOR)					5		75		75		30
Link Speed (mph)	45				45		30		30		263
Link Distance (ft)	654				1770		319		7.3		6.0
Travel Time (s)	9.9				26.8		7.3		7.3		6.0
Peak Hour Factor	0.91	0.91	0.91	0.87	0.87	0.87	0.84	0.84	0.84	0.92	0.92
Adj. Flow (vph)	107	1004	0	0	1148	30	108	0	554	0	0
Shared Lane Traffic (%)											
Lane Group Flow (vph)	107	1004	0	0	1178	0	108	554	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Left	Right	Left	Right
Median Width(ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset(ft)	0				0		0		0		0
Crosswalk Width(ft)	16				16		16		16		16
Two way Left Turn Lane	Yes				Yes		Yes		Yes		Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9	15	9	15	9	15
Number of Detectors	1	2			2		1		2		2
Detector Template	Left	Thru			Thru		Left		Thru		Thru
Leading Detector (ft)	20	100			100		20		100		100
Trailing Detector (ft)	0	0			0		0		0		0
Detector 1 Position(ft)	0	0			0		0		0		0
Detector 1 Size(ft)	20	6			6		20		6		6
Detector 1 Type	Ch+Ex	Ch+Ex			Ch+Ex		Ch+Ex		Ch+Ex		Ch+Ex
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0			0.0		0.0		0.0		0.0
Detector 1 Queue (s)	0.0	0.0			0.0		0.0		0.0		0.0
Detector 1 Delay (s)	0.0	0.0			0.0		0.0		0.0		0.0
Detector 2 Position(ft)	94				94		94		94		94
Detector 2 Size(ft)	6				6		6		6		6
Detector 2 Type	Ch+Ex	Ch+Ex			Ch+Ex		Ch+Ex		Ch+Ex		Ch+Ex
Detector 2 Channel											
Detector 2 Extend (s)	0.0	0.0			0.0		0.0		0.0		0.0
Turn Type	Perm				Perm		Perm		Perm		Perm
Protected Phases	2				6		8		8		8
Permitted Phases	2				6		8		8		8
Detector Phase	2				6		8		8		8

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
2: Maple Road & Millersport Hwy NB

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	1.0	1.0			4.0		1.0	1.0		1.0	1.0
Minimum Split (s)	6.1	6.1			9.1		6.2	6.2		6.2	6.2
Total Split (s)	40.0	40.0	0.0	0.0	40.0	0.0	30.0	30.0	0.0	0.0	0.0
Total Split (%)	57.1%	57.1%	0.0%	0.0%	57.1%	0.0%	42.9%	42.9%	0.0%	0.0%	0.0%
Maximum Green (s)	34.9	34.9			34.9		25.4	25.4		25.4	25.4
Yellow Time (s)	3.9	3.9			3.9		3.2	3.2		3.2	3.2
All-Red Time (s)	1.2	1.2			1.2		1.4	1.4		1.4	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	4.0	4.0	5.1	4.0	4.6	4.6	4.0	4.0	4.0
Lead-Lag											
Lead-Lag Optimize?											
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0
Recall Mode	C-Min	C-Min			C-Min		None	None		None	None
Act Effct Green (s)	35.8	35.8			35.8		24.5	24.5		24.5	24.5
Actuated g/C Ratio	0.51	0.51			0.51		0.35	0.35		0.35	0.35
v/c Ratio	0.73	0.55			0.65		0.17	0.92		0.17	0.92
Control Delay	44.2	11.0			14.9		16.1	42.3		16.1	42.3
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0
Total Delay	44.2	11.0			14.9		16.1	42.3		16.1	42.3
LOS	D	B			B		B	B		B	D
Approach Delay	14.2				14.9		B	B		B	D
Approach LOS	B				B		B	B		B	D
Intersection Summary											
Area Type:	Other										
Cycle Length:	70										
Actuated Cycle Length:	70										
Offset:	5 (7%), Referenced to phase 2:EBTL and 6:WBT, Start of Green										
Natural Cycle:	70										
Control Type:	Actuated-Coordinated										
Maximum v/c Ratio:	0.92										
Intersection Signal Delay:	19.8										
Intersection LOS:	B										
Intersection Capacity Utilization:	74.9%										
Analysis Period (min):	15										



Splits and Phases: 2: Maple Road & Millersport Hwy NB

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
3: Maple Road & Maplemere Road

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	36	1241	35	21	911	62	25	0	12	77	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	0	70	0	0	0	0	0	0	0
Storage Lanes	1	0	1	0	0	0	0	0	0	0	0
Taper Length (ft)	50	25	50	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00
Fit	0.996	0.950	0.950	0.990	0.967	0.964	0.967	0.964	0.967	0.964	0.964
Satd. Flow (prot)	1770	3525	0	1770	3504	0	1724	0	1724	0	1738
Satd. Flow (perm)	0.223	0.155	0.155	0.170	0.155	0.155	0.170	0.155	0.170	0.155	0.164
Right Turn on Red	415	3525	0	289	3504	0	1390	0	1372	0	1372
Right Turn (RTOR)	6	Yes	15	Yes	15	Yes	19	Yes	19	Yes	25
Satd. Flow (RTOR)	45	1770	45	1106	378	402	30	30	30	30	30
Link Speed (mph)	26.8	16.8	16.8	16.8	16.8	16.8	8.6	8.6	8.6	9.1	9.1
Travel Time (s)	0.94	0.94	0.87	0.87	0.87	0.87	0.62	0.62	0.62	0.81	0.81
Peak Hour Factor	38	1320	37	24	1047	71	40	0	19	95	10
Adj. Flow (vph)	38	1357	0	24	1118	0	0	59	0	143	0
Lane Group Flow (vph)	No	No	No	No	No	No	No	No	No	No	No
Enter Blocked Intersection	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Right
Lane Alignment	12	0	0	12	0	0	0	0	0	0	0
Median Width(ft)	16	16	16	16	16	16	16	16	16	16	16
Link Offset(ft)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Crosswalk Width(ft)	15	15	15	15	15	15	15	15	15	15	15
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	1	2	1	2	1	2	1	2	1	2	1
Number of Detectors	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Thru
Detector Template	20	100	20	100	20	100	20	100	20	100	100
Leading Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	6	20	6	20	6	20	6	6
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94	94	94	94	94	94	94	94	94	94	94
Detector 2 Size(ft)	6	6	6	6	6	6	6	6	6	6	6
Detector 2 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 2 Channel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Extend (s)	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm
Turn Type	2	2	6	6	6	6	8	8	8	8	4
Protected Phases	2	2	6	6	6	6	8	8	8	8	4
Permitted Phases	2	2	6	6	6	6	8	8	8	8	4
Detector Phase	2	2	6	6	6	6	8	8	8	8	4

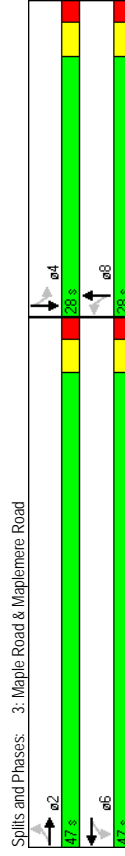
Lanes, Volumes, Timings
SRF & Associates

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
3: Maple Road & Maplemere Road

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	9.0	9.0	9.0	9.0	9.0	27.0	27.0	27.0	27.0	27.0
Total Split (s)	47.0	47.0	0.0	47.0	47.0	0.0	28.0	28.0	0.0	28.0	28.0
Total Split (%)	62.7%	62.7%	0.0%	62.7%	62.7%	0.0%	37.3%	37.3%	0.0%	37.3%	37.3%
Maximum Green (s)	42.0	42.0	42.0	42.0	42.0	42.0	23.0	23.0	23.0	23.0	23.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
LeadLag											
Lead-Lag Optimize?											
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
Recall Mode	Min	Min	Min	Min	Min	Min	None	None	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Pedestrian Calls (#/hr)							0	0	0	0	0
Act Effic Green (s)	33.3	33.3	33.3	33.3	33.3	33.3	9.7	9.7	9.7	10.3	10.3
Actuated g/C Ratio	0.68	0.68	0.68	0.68	0.68	0.68	0.20	0.20	0.20	0.21	0.21
v/c Ratio	0.14	0.57	0.12	0.47	0.12	0.47	0.20	0.20	0.20	0.27	0.27
Control Delay	6.7	7.6	7.1	6.6	7.1	6.6	15.8	15.8	15.8	22.0	22.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.7	7.6	7.1	6.6	7.1	6.6	15.8	15.8	15.8	22.0	22.0
LOS	A	A	A	A	A	A	B	B	B	C	C
Approach Delay	7.6	7.6	7.6	6.6	7.6	6.6	15.8	15.8	15.8	22.0	22.0
Approach LOS	A	A	A	A	A	A	B	B	B	C	C
Intersection Summary	Other										
Area Type:	Other										
Cycle Length:	75										
Actuated Cycle Length:	49.3										
Natural Cycle:	60										
Control Type:	Actuated-Uncoordinated										
Maximum v/c Ratio:	0.57										
Intersection Signal Delay:	8.1										
Intersection Capacity Utilization:	51.3%										
Analysis Period (min):	15										



Spills and Phases: 3: Maple Road & Maplemere Road
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Lanes, Volumes, Timings
SRF & Associates

Alternative 1
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
4: Maple Road & Donna Lea Blvd

4/24/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔↔	↔↔	↔↔	↔↔	↔↔
Volume (vph)	1301	29	23	982	12	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	50	0	0	0	0
Storage Lanes	0	1	0	1	0	0
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Flt	0.997				0.914	
Flt Protected		0.950			0.982	
Satd. Flow (prot)	3529	0	1770	3539	1672	0
Flt Permitted		0.950			0.982	
Satd. Flow (perm)	3529	0	1770	3539	1672	0
Link Speed (mph)	45		45	30		
Link Distance (ft)	1106		1000	355		
Travel Time (s)	16.8		15.2	8.1		
Peak Hour Factor	0.73	0.73	0.77	0.82	0.82	0.82
Adj. Flow (vph)	1782	40	30	1275	15	26
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1822	0	30	1275	41	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12		12	12		
Link Offset(ft)	0		0	0		
Crosswalk Width(ft)	16		16	16		
Two way Left Turn Lane	Yes		Yes			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		15		9
Sign Control	Free	Free	Free	Free	Stop	Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	46.9%					
Analysis Period (min)	15					
	ICU Level of Service: A					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
4: Maple Road & Donna Lea Blvd

4/24/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔↔	↔↔	↔↔	↔↔	↔↔
Volume (veh/h)	1301	29	23	982	12	21
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%		0%	0%	0%	0%
Peak Hour Factor	0.73	0.73	0.77	0.77	0.82	0.82
Hourly flow rate (vph)	1782	40	30	1275	15	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLT		TWLT			
Median storage (veh)	2		2			
Upstream signal (ft)	1106					
pX, platoon unblocked		0.76		0.76	0.76	0.76
vC, conflicting volume		1822		2499	1802	911
vC1, stage 1 conf vol					1802	
vC2, stage 2 conf vol		1450		2342	697	252
vCu, unblocked vol		4.1		6.8	6.9	
IC, 2 stage (s)				5.8		
IF (s)		2.2		3.5	3.3	
p0 queue free %		92		89	95	
cM capacity (veh/h)		352		132	568	
Direction, Lane #						
	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	1188	634	30	638	638	40
Volume Left	0	0	30	0	0	15
Volume Right	0	40	0	0	0	26
cSH	1700	1700	352	1700	1700	257
Volume to Capacity	0.70	0.37	0.08	0.38	0.38	0.16
Queue Length 95th (ft)	0	0	7	0	0	14
Control Delay (s)	0.0	0.0	16.2	0.0	0.0	21.6
Lane LOS			C			C
Approach Delay (s)	0.0		0.4			21.6
Approach LOS						C
Intersection Summary						
Average Delay	0.4					
Intersection Capacity Utilization	46.9%					
Analysis Period (min)	15					
	ICU Level of Service: A					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
5: Maple Road & Audubon Golf Club

4/24/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	0	1324	14	8	1014	2	10	0	6	0	0
Ideal Flow (vpph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	50	0	0	0	0	0	0	0	0
Storage Lanes	1	0	1	0	0	0	0	0	0	0	0
Taper Length (ft)	25	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Flt Protected		0.998		0.950		0.948		0.970			
Satd. Flow (prot)	1863	3532	0	1770	3539	0	1713	0	0	0	1863
Flt Permitted		0.950		0.970		0.970		0.970			
Satd. Flow (perm)	1863	3532	0	1770	3539	0	1713	0	0	0	1863
Link Speed (mph)	45	45	45	45	45	45	45	45	45	45	45
Link Distance (ft)	446	446	446	446	446	446	446	446	446	446	446
Travel Time (s)	6.8	6.8	8.4	8.4	8.4	10.7	10.7	10.7	10.7	10.7	2.5
Peak Hour Factor	0.92	0.92	0.92	0.93	0.93	0.93	0.61	0.61	0.61	0.92	0.92
Adj. Flow (vph)	0	1439	15	9	1090	2	16	0	10	0	0
Shared Lane Traffic (%)											
Lane Group Flow (vph)	0	1454	0	9	1092	0	0	26	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Right
Median Width (ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset (ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width (ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	15	15	15	15	15	15	15	15	15	15
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free
Intersection Summary											
Area Type:	Other										
Control Type:	Unsignalized										
Intersection Capacity Utilization	47.0%										
Analysis Period (min)	15										
ICU Level of Service:	A										

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
5: Maple Road & Audubon Golf Club

4/24/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (veh/h)	0	1324	14	8	1014	2	10	0	6	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.93	0.93	0.93	0.61	0.61	0.61	0.92	0.92
Hourly flow rate (vph)	0	1439	15	9	1090	2	16	0	10	0	0
Pedestrians											
Lane Width (ft)											
Walking Speed (ft/s)											
Percent Blockage											
Right turn flare (veh)											
Median type											
Median storage (veh)											
Upstream signal (ft)											
pX, platoon unblocked											
vC, conflicting volume	1092		1454			2009	2556	727	1838	2563	546
vC1, stage 1 conf vol			1447			1447	1447		1109	1109	
vC2, stage 2 conf vol			562			1110	1110		729	1454	
vCu, unblocked vol	1092		1454			2009	2556	727	1838	2563	546
IC, single (s)	4.1		4.1			7.5	6.5	6.9	7.5	6.5	6.9
IC, 2 stage (s)						6.5	5.5		6.5	5.5	
IF (s)	2.2		2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100		98			87	100	97	100	100	100
cM capacity (veh/h)	635		461			130	155	366	186	150	482
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1			
Volume Total	0	959	495	9	727	366	26	0			
Volume Left	0	0	0	9	0	0	16	0			
Volume Right	0	0	15	0	0	2	10	0			
cSH	1700	1700	1700	461	1700	1700	172	1700			
Volume to Capacity	0.00	0.56	0.29	0.02	0.43	0.22	0.15	0.00			
Queue Length 95th (ft)	0	0	0	1	0	0	13	0			
Control Delay (s)	0.0	0.0	0.0	13.0	0.0	0.0	29.7	0.0			
Lane LOS				B			D	A			
Approach Delay (s)	0.0		0.1				29.7	0.0			
Approach LOS							D	A			
Intersection Summary											
Average Delay	0.3										
Intersection Capacity Utilization	47.0%										
ICU Level of Service	A										
Analysis Period (min)	15										

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
 6: Maple Road & North Forest Road

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	187	1010	143	237	760	96	92	349	204	169	385
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	415	220	315	220	315	220	250	250	250	250	250
Storage Length (ft)	1	1	1	1	1	1	1	1	1	1	1
Storage Lanes	90	115	60	25	95	25	95	25	90	90	25
Taper Length (ft)	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor							0.850				0.850
Flt Protected	0.950			0.950			0.950			0.950	
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1863	1583	1770	1863
Flt Permitted	0.217			0.094			0.173			0.178	
Satd. Flow (perm)	404	3539	1583	175	3539	1583	322	1863	1583	332	1863
Right Turn on Red		Yes			Yes		No		Yes		Yes
Satd. Flow (RTOR)		139							28		72
Link Speed (mph)		45			45				35		35
Link Distance (ft)		1705			820				529		608
Travel Time (s)		25.8			12.4				10.3		11.8
Peak Hour Factor	0.92	0.92	0.92	0.90	0.90	0.90	0.96	0.96	0.96	0.87	0.87
Adj. Flow (vph)	203	1098	155	263	844	107	96	364	212	194	443
Shared Lane Traffic (%)											
Lane Group Flow (vph)	203	1098	155	263	844	107	96	364	212	194	443
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Left	Right	Left	Right
Median Width (ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset (ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width (ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane	Yes										
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	2	1	2	1	2	1	2	1
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru
Leading Detector (ft)	20	100	20	100	20	100	20	100	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size (ft)	20	6	20	20	6	20	20	6	20	20	6
Detector 1 Type	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position (ft)	94			94			94			94	
Detector 2 Size (ft)	6			6			6			6	
Detector 2 Type	Ch+Ex			Ch+Ex			Ch+Ex			Ch+Ex	
Detector 2 Channel											
Detector 2 Extend (s)	0.0			0.0			0.0			0.0	
Turn Type	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt
Protected Phases	5	2	3	1	6	7	3	8	1	7	4
Permitted Phases	2	2	2	6	6	6	8	8	8	4	4
Detector Phase	5	2	3	1	6	7	3	8	1	7	4

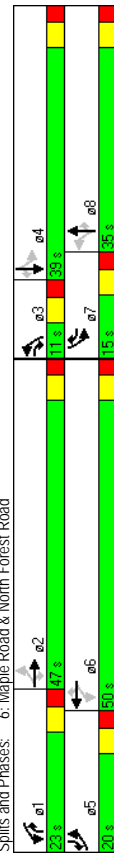
Lanes, Volumes, Timings
 SRF & Associates
 Alternative 1
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
 6: Maple Road & North Forest Road

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase	1.0	4.0	1.0	1.0	4.0	1.0	1.0	4.0	1.0	1.0	4.0
Minimum Initial (s)	7.0	35.0	7.0	7.0	35.0	7.0	7.0	35.0	7.0	7.0	35.0
Minimum Split (s)	20.0	47.0	11.0	23.0	50.0	15.0	11.0	35.0	23.0	15.0	39.0
Total Split (s)	16.7%	39.2%	9.2%	19.2%	41.7%	12.5%	9.2%	29.2%	19.2%	12.5%	32.5%
Total Split (%)	14.0	41.0	5.0	17.0	44.0	9.0	5.0	29.0	17.0	9.0	33.0
Maximum Green (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Yellow Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Last Time Adjust (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Total Lost Time (s)	Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lead	Lag	Lag	Lead	Lag
Lead/Lag	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Lead-Lag Optimize?	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Vehicle Extension (s)	None	None	None	None	None	None	None	None	None	None	None
Recall Mode	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Walk Time (s)	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
Flash Dont Walk (s)	50.9	38.9	50.0	58.2	42.6	57.7	31.2	26.1	47.8	39.2	30.2
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0	0	0	0
Act Effct Green (s)	0.45	0.34	0.44	0.51	0.37	0.51	0.27	0.23	0.42	0.34	0.26
Actuated G/C Ratio	0.63	0.91	0.20	0.85	0.64	0.13	0.63	0.85	0.31	0.85	0.90
v/c Ratio	24.4	48.2	5.2	54.4	32.5	16.5	47.4	62.2	20.5	60.8	63.5
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	24.4	48.2	5.2	54.4	32.5	16.5	47.4	62.2	20.5	60.8	63.5
Total Delay	C	D	A	D	C	B	D	D	E	C	E
LOS	40.3	D	35.9	D	46.9	D	53.2	D			
Approach Delay											
Approach LOS											

Intersection Summary
 Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 114
 Natural Cycle: 85
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.91
 Intersection Signal Delay: 42.5
 Intersection Capacity Utilization: 88.8%
 Analysis Period (min): 15



Lanes, Volumes, Timings
 SRF & Associates
 Alternative 1
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
7: Sheridan Drive & Mill Street

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	11	1313	21	121	1353	53	147	53	148	34	68
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	100	0	150	0	40	0	40	0	75	0	75
Storage Length (ft)	1	0	1	0	1	0	1	0	1	0	1
Storage Lanes	65	25	60	25	25	25	25	25	25	25	25
Taper Length (ft)	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.998		0.994		0.890		0.977				
Flt Protected	0.950		0.950		0.950		0.950				
Sat'd. Flow (prot)	1770	3532	0	1770	3518	0	1770	1658	0	1770	1820
Flt Permitted	0.089		0.081		0.600		0.608				
Sat'd. Flow (perm)	166	3532	0	151	3518	0	1118	1658	0	1133	1820
Right Turn on Red		No		Yes			No		No		Yes
Sat'd. Flow (RTOR)				4							7
Link Speed (mph)	45			45			30		30		30
Link Distance (ft)	2782			977			838		362		82
Travel Time (s)	42.2			14.8			19.0		8.2		8.2
Peak Hour Factor	0.84	0.84	0.84	0.92	0.92	0.83	0.83	0.83	0.83	0.77	0.77
Adj. Flow (vph)	13	1563	25	132	1471	58	177	64	178	44	88
Shared Lane Traffic (%)											16
Lane Group Flow (vph)	13	1588	0	132	1529	0	177	242	0	44	104
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset(ft)	16			16			16		16		16
Crosswalk Width(ft)	Yes			Yes			Yes		Yes		Yes
Two way Left Turn Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Headway Factor	15	9	15	9	15	9	15	9	15	9	15
Turning Speed (mph)	1	2	1	2	1	2	1	2	1	2	1
Number of Detectors	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left
Detector Template	20	100	20	100	20	100	20	100	20	100	20
Leading Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	6	20	6	20	6	20	6	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94	0.0	94	0.0	94	0.0	94	0.0	94	0.0	94
Detector 2 Size(ft)	6	6	6	6	6	6	6	6	6	6	6
Detector 2 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 2 Channel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Extend (s)	Perm		pm+pt		pm+pt		pm+pt		Perm		Perm
Turn Type	2	1	6	6	3	8	8	4	4	4	4
Protected Phases	2	2	1	6	6	3	8	8	4	4	4
Permitted Phases	2	2	1	6	6	3	8	8	4	4	4
Detector Phase	2	2	1	6	6	3	8	8	4	4	4

Lanes, Volumes, Timings SRF & Associates Alternative 1 Page 13

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
7: Sheridan Drive & Mill Street

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase	4.0	4.0		1.0	4.0		1.0	4.0		4.0	4.0
Minimum Initial (s)	28.3	28.3		6.2	28.3		6.2	34.2		34.2	34.2
Minimum Split (s)	50.0	50.0	0.0	15.0	65.0	0.0	25.0	70.0	0.0	45.0	45.0
Total Split (s)	37.0%	37.0%	0.0%	11.1%	48.1%	0.0%	18.5%	51.9%	0.0%	33.3%	33.3%
Total Split (%)	44.5	44.5	10.7	59.5	19.8	64.8				39.8	39.8
Maximum Green (s)	4.3	4.3	3.2	4.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2
Yellow Time (s)	1.2	1.2	1.1	1.2	1.1	1.2	2.0	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	5.5	5.5	4.0	4.3	5.5	4.0	5.2	5.2	4.0	5.2	5.2
Total Lost Time (s)	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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
Recall Mode	None	None	None	None	None	None	Max	Max	Max	Max	Max
Walk Time (s)	7.0	7.0		7.0			7.0		7.0		7.0
Flash Dont Walk (s)	15.0	15.0		15.0			22.0		22.0		22.0
Pedestrian Calls (#/hr)	0	0		0			0		0		0
Act Effct Green (s)	45.1	45.1	60.7	59.5	64.8	64.8	64.8	64.8	64.8	39.8	39.8
Actuated g/C Ratio	0.33	0.33	0.45	0.44	0.48	0.48	0.48	0.48	0.48	0.29	0.29
v/c Ratio	0.23	1.35	0.70	0.98	0.28	0.30	0.13	0.19	0.13	0.19	0.19
Control Delay	46.1	197.5	45.9	56.7	21.7	22.7	22.7	22.7	22.7	36.4	34.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.1	197.5	45.9	56.7	21.7	22.7	22.7	22.7	22.7	36.4	34.3
LOS	D	F	D	E	D	E	C	C	C	D	C
Approach Delay	196.2			55.8			22.3				34.9
Approach LOS	F			E			C				C

Intersection Summary

Area Type:	Other
Cycle Length:	135
Actuated Cycle Length:	135
Natural Cycle:	100
Control Type:	Seml Act-Uncoord
Maximum v/c Ratio:	1.35
Intersection Signal Delay:	110.1
Intersection Capacity Utilization:	75.7%
Analysis Period (min):	15

Spills and Phases: 7: Sheridan Drive & Mill Street
 e1 15 s, e2 29 s, e3 45 s, e4 70 s, e5 70 s, e6 70 s, e7 70 s, e8 70 s
 Lanes, Volumes, Timings SRF & Associates Alternative 1 Page 14

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
 8: Sheridan Drive & North Forest Road

4/24/2014

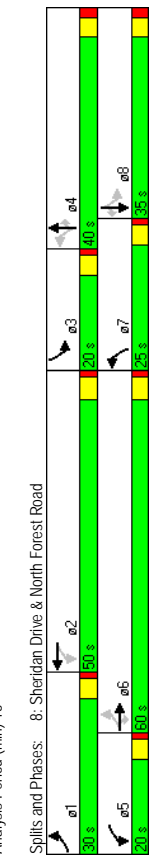
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	141	1284	271	305	1148	41	281	464	82	24	494
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	405	170	260	170	260	0	180	265	180	200	200
Storage Lanes	1	1	1	1	1	0	1	1	1	1	1
Taper Length (ft)	200	25	200	25	200	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95
Flt Protected	0.950			0.950			0.950			0.950	
Satd. Flow (prot)	1770	3539	1583	1770	3522	0	1770	1863	1583	1770	3539
Flt Permitted	0.073			0.069			0.183			0.178	
Satd. Flow (perm)	136	3539	1583	129	3522	0	341	1863	1583	332	3539
Right Turn on Red	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Satd. Flow (RTOR)	132			3					70		216
Link Speed (mph)	45			45			40		40		35
Link Distance (ft)	1438			2219			547		547		354
Travel Time (s)	21.8			33.6			9.3		9.3		6.9
Peak Hour Factor	0.94	0.94	0.94	0.93	0.93	0.93	0.89	0.89	0.89	0.95	0.95
Adj. Flow (vph)	150	1366	288	328	1234	44	316	521	92	25	520
Shared Lane Traffic (%)											
Lane Group Flow (vph)	150	1366	288	328	1278	0	316	521	92	25	520
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Left	Right	Left	Right
Median Width (ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset (ft)	0			0			0		0		0
Crosswalk Width (ft)	16			16			16		16		16
Two way Left Turn Lane	Yes			Yes			Yes		Yes		Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	15	9	15	15	9	15	15	9
Number of Detectors	1	2	1	2	1	2	1	2	1	1	2
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru
Leading Detector (ft)	20	100	20	100	20	100	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size (ft)	20	6	20	20	6	20	6	20	6	20	6
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position (ft)	94			94			94		94		94
Detector 2 Size (ft)	6			6			6		6		6
Detector 2 Type	CI+EX			CI+EX			CI+EX		CI+EX		CI+EX
Detector 2 Channel											
Detector 2 Extend (s)	0.0			0.0			0.0		0.0		0.0
Turn Type	pm+pt	Perm	pm+pt	pm+pt	Perm	pm+pt	Perm	pm+pt	Perm	pm+pt	Perm
Protected Phases	1	6	5	2	7	4	3	8			
Permitted Phases	6	6	6	2	4	4	4	8	8	8	8
Detector Phase	1	6	6	5	2	7	4	4	3	8	8

Lanes, Volumes, Timings
 SRF & Associates
 Alternative 1
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
 8: Sheridan Drive & North Forest Road

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.3	27.9	27.9	8.3	27.9	8.3	27.9	27.9	27.9	8.3	27.9
Total Split (s)	30.0	60.0	60.0	20.0	50.0	0.0	25.0	40.0	40.0	20.0	35.0
Total Split (%)	21.4%	42.9%	42.9%	14.3%	35.7%	0.0%	17.9%	28.6%	28.6%	14.3%	25.0%
Maximum Green (s)	25.7	54.9	54.9	15.7	44.9		20.7	34.9	34.9	15.7	29.9
Yellow Time (s)	3.2	3.9	3.9	3.2	3.9		3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.1	1.2	1.1	1.2	1.1		1.1	1.1	1.1	1.1	1.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.3	5.1	5.1	4.3	5.1		4.3	5.1	5.1	4.3	5.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	None	Max	None		None	None	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0	15.0	15.0	15.0		15.0	15.0	15.0	15.0	15.0
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0	0	0	0
Act Effct Green (s)	68.2	55.0	55.0	73.6	58.2		51.0	43.4	43.4	33.0	25.4
Actuated g/C Ratio	0.50	0.41	0.41	0.54	0.43		0.38	0.32	0.32	0.24	0.19
v/c Ratio	0.69	0.95	0.40	1.26	0.84		0.92	0.87	0.17	0.16	0.46
Control Delay	43.6	54.1	17.2	178.2	41.8		65.1	60.9	12.5	29.8	61.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	43.6	54.1	17.2	178.2	41.8		65.1	60.9	12.5	29.8	61.2
LOS	D	D	B	F	D		E	E	B	C	E
Approach Delay	47.3			69.7			57.5				45.3
Approach LOS	D			E			E				D



Lanes, Volumes, Timings
 SRF & Associates
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
10: Sheridan Drive & Fenwick Road

4/24/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕↕	↕↕	↕↕	↕↕	↕↕	↕↕
Volume (vph)	1699	13	5	1644	13	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	75	0	0	0	0
Storage Lanes	0	1	0	1	0	0
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Flt Protected	0.999		0.950	0.922		0.979
Satd. Flow (prot)	3536	0	1770	3539	1681	0
Flt Permitted	0.950		0.950	0.979		0.979
Satd. Flow (perm)	3536	0	1770	3539	1681	0
Link Speed (mph)	45		45	30		30
Link Distance (ft)	635		230	278		278
Travel Time (s)	9.6		3.5	6.3		6.3
Peak Hour Factor	0.87	0.87	0.94	0.94	0.75	0.75
Adj. Flow (vph)	1953	15	5	1749	17	23
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1968	0	5	1749	40	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12		12	12		12
Link Offset(ft)	0		0	0		0
Crosswalk Width(ft)	16		16	16		16
Two way Left Turn Lane	Yes		Yes			Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15	15	15	15	9
Sign Control	Free	Free	Free	Free	Stop	Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	57.4%					
Analysis Period (min)	15					
ICU Level of Service:	B					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
10: Sheridan Drive & Fenwick Road

4/24/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕↕	↕↕	↕↕	↕↕	↕↕	↕↕
Volume (veh/h)	1699	13	5	1644	13	17
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%		0%	0%		0%
Peak Hour Factor	0.87	0.87	0.94	0.94	0.75	0.75
Hourly flow rate (vph)	1953	15	5	1749	17	23
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLT		TWLT			
Median storage (veh)	2		2			
Upstream signal (ft)	635					
pX, platoon unblocked		0.71		0.71		0.71
vC, conflicting volume		1968		1968		1960
vC1, stage 1 conf vol						885
vC2, stage 2 conf vol		1541		1541		2782
vCu, unblocked vol		4.1		6.8		6.9
IC, single (s)						5.8
IC, 2 stage (s)						3.3
IF (s)		2.2		3.5		3.3
p0 queue free %		98		84		96
cM capacity (veh/h)		302		107		614
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	1302	666	5	874	874	40
Volume Left	0	0	5	0	0	17
Volume Right	0	15	0	0	0	23
cSH	1700	1700	302	1700	1700	201
Volume to Capacity	0.77	0.39	0.02	0.51	0.51	0.20
Queue Length 95th (ft)	0	0	1	0	0	18
Control Delay (s)	0.0	0.0	17.1	0.0	0.0	27.3
Lane LOS			C			D
Approach Delay (s)	0.0	0.1				27.3
Approach LOS						D
Intersection Summary						
Average Delay	0.3					
Intersection Capacity Utilization	57.4%					
ICU Level of Service	B					
Analysis Period (min)	15					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
11: Sheridan Drive & Frankhauser Road

4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (vph)	37	1649	1616	41	63	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105	0	0	0	0	50
Storage Lanes	1	0	0	1	1	1
Taper Length (ft)	65	25	25	25	25	25
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Flt Permitted	0.950	0.996			0.950	0.850
Satd. Flow (prot)	1770	3539	3525	0	1770	1583
Flt Permitted	0.094				0.950	
Satd. Flow (perm)	175	3539	3525	0	1770	1583
Right Turn on Red		Yes			Yes	Yes
Satd. Flow (RTOR)		4			4	4
Link Speed (mph)	45	45			30	
Link Distance (ft)	101.4	635			828	
Travel Time (s)	15.4	9.6			18.8	
Peak Hour Factor	0.90	0.90	0.91	0.91	0.82	0.82
Adj. Flow (vph)	41	1832	1776	45	77	52
Shared Lane Traffic (%)						
Lane Group Flow (vph)	41	1832	1821	0	77	52
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Right
Median Width(ft)	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0
Crosswalk Width(ft)	16	16			16	
Two way Left Turn Lane	Yes	Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	2	2	9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Left	Right	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94	94				
Detector 2 Size(ft)	6	6			6	6
Detector 2 Type	CI+EX	CI+EX			CI+EX	CI+EX
Detector 2 Channel						
Detector 2 Extend (s)	0.0	0.0			0.0	0.0
Turn Type	Perm				Perm	Perm
Protected Phases		2	6		4	
Permitted Phases	2				4	4
Detector Phase	2	2	6		4	4

Lanes, Volumes, Timings
SRF & Associates
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
11: Sheridan Drive & Frankhauser Road

4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	1.0	1.0
Minimum Split (s)	40.0	40.0	40.0	40.0	31.1	31.1
Total Split (s)	40.0	40.0	40.0	40.0	40.0	40.0
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Maximum Green (s)	35.2	35.2	35.2	35.2	34.9	34.9
Yellow Time (s)	3.9	3.9	3.9	3.9	3.2	3.2
All-Red Time (s)	0.9	0.9	0.9	0.9	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.8	4.8	4.8	4.8	5.1	5.1
LeadLag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0	15.0	15.0	19.0	19.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effct Green (s)	64.3	64.3	64.3	64.3	8.9	8.9
Actuated g/C Ratio	0.80	0.80	0.80	0.80	0.11	0.11
v/c Ratio	0.29	0.64	0.64	0.64	0.39	0.29
Control Delay	10.1	5.9	5.9	5.9	38.0	33.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.1	5.9	5.9	5.9	38.0	33.8
LOS	B	A	A	A	D	C
Approach Delay		6.0	5.9		36.3	
Approach LOS		A	A		D	
Intersection Summary						
Area Type:	Other					
Cycle Length:	80					
Actuated Cycle Length:	80					
Offset: 55 (69%):	Referenced to phase 2:EBTL and 6:WBT, Start of Green					
Natural Cycle:	80					
Control Type:	Actuated-Coordinated					
Maximum v/c Ratio:	0.64					
Intersection Signal Delay:	7.0					
Intersection Capacity Utilization:	57.7%					
Analysis Period (min):	15					
Spills and Phases:	11: Sheridan Drive & Frankhauser Road					
	↔	↔	↔	↔	↔	↔
	40 s	40 s	40 s	40 s	40 s	40 s

Lanes, Volumes, Timings
SRF & Associates
Alternative 1
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
12: Sheridan Drive & I-290 NB

4/24/2014

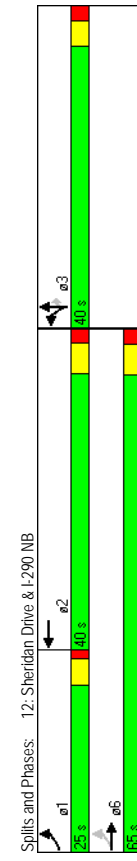
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	355	1303	0	0	1093	616	317	0	405	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	0	0	230	0	0	0	0	0	0
Storage Lanes	1	0	0	0	1	0	0	0	0	0	0
Taper Length (ft)	105	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	0.91	0.91	0.95	1.00	1.00
Flt Protected	0.950				0.946			0.986	0.850		
Satd. Flow (prot)	1770	5085	0	0	4811	0	1681	1489	1504	0	0
Flt Permitted	0.081				0.950		0.986				
Satd. Flow (perm)	151	5085	0	0	4811	0	1681	1489	1504	0	0
Right Turn on Red		Yes			Yes			Yes	Yes		Yes
Satd. Flow (RTOR)		144			144			47	47		
Link Speed (mph)	45	45			45			30	30		30
Link Distance (ft)	610	193			193			830	423		423
Travel Time (s)	9.2	2.9			2.9			18.9	9.6		9.6
Peak Hour Factor	0.99	0.99	0.99	0.92	0.92	0.92	0.80	0.80	0.80	0.92	0.92
Adj. Flow (vph)	359	1316	0	0	1188	670	396	0	506	0	0
Shared Lane Traffic (%)							21%		43%		
Lane Group Flow (vph)	359	1316	0	0	1858	0	313	301	288	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Right	Left	Left	Right	Left	Right
Median Width (ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset (ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width (ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane											
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	2	9	15	1	2	9	15	9
Number of Detectors	1	2			2		1	2	1		
Detector Template	Left	Thru			Thru		Left	Thru	Right		
Leading Detector (ft)	20	100			100		20	100	20		
Trailing Detector (ft)	0	0			0		0	0	0		
Detector 1 Position (ft)	0	0			0		0	0	0		
Detector 1 Size (ft)	20	6			6		20	6	20		
Detector 1 Type	CI+EX	CI+EX			CI+EX		CI+EX	CI+EX	CI+EX		
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0	0.0		
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0	0.0		
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0	0.0		
Detector 2 Position (ft)	94				94						
Detector 2 Size (ft)	6	6			6		6	6	6		
Detector 2 Type	CI+EX	CI+EX			CI+EX		CI+EX	CI+EX	CI+EX		
Detector 2 Channel											
Detector 2 Extend (s)	0.0	0.0			0.0		0.0	0.0	0.0		
Turn Type	pm+pt				custom				Perm		
Protected Phases	1	6			2		3	3	3		
Permitted Phases	6				3		3	3	3		
Detector Phase	1	6			2		3	3	3		

Lanes, Volumes, Timings
SRF & Associates
Alternative 1
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
12: Sheridan Drive & I-290 NB

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	1.0	4.0			4.0		4.0	4.0	4.0		
Minimum Split (s)	6.2	33.9			27.8		29.0	29.0	29.0		
Total Split (s)	25.0	65.0	0.0	0.0	40.0	0.0	40.0	40.0	40.0	0.0	0.0
Total Split (%)	23.8%	61.9%	0.0%	0.0%	38.1%	0.0%	38.1%	38.1%	38.1%	0.0%	0.0%
Maximum Green (s)	20.7	59.1			34.2		34.8	34.8	34.8		
Yellow Time (s)	3.2	3.9			3.9		3.2	3.2	3.2		
All-Red Time (s)	1.1	2.0			1.9		2.0	2.0	2.0		
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.3	5.9	4.0	4.0	5.8	4.0	5.2	5.2	5.2	4.0	4.0
Lead/Lag	Lead	Lag			Lag						
Vehicle Extension (s)	2.0	3.0			3.0		2.0	2.0	2.0		
Recall Mode	None	C-Max			C-Max		None	None	None		
Walk Time (s)	7.0				7.0						
Flash Dont Walk (s)	21.0				15.0						
Pedestrian Calls (#/hr)	0				0						
Act Effct Green (s)	70.0	68.4			45.0		25.5	25.5	25.5		
Actuated g/C Ratio	0.67	0.65			0.43		0.24	0.24	0.24		
v/c Ratio	0.91	0.40			0.87		0.77	0.76	0.72		
Control Delay	55.0	9.9			32.7		48.7	42.4	39.6		
Queue Delay	0.0	0.0			0.0		0.0	0.0	0.0		
Total Delay	55.0	9.9			32.7		48.7	42.4	39.6		
LOS	D	A			C		D	D	D		
Approach Delay		19.6			32.7						
Approach LOS		B			C						



Lanes, Volumes, Timings
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
13: Sheridan Drive & Harlem Road

4/24/2014

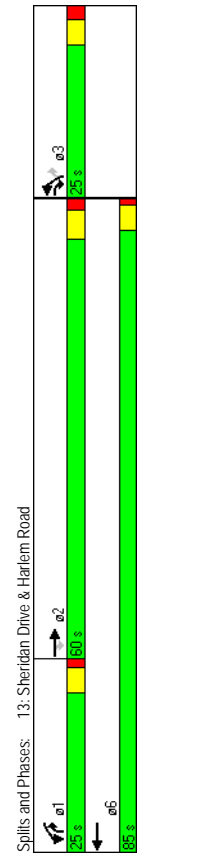
Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔↔	↔↔	↔↔	↔↔
Volume (vph)	966	604	406	1004	267
Ideal Flow (vphpl)	1900	1900	1900	1900	1900
Storage Length (ft)	0	215	0	140	0
Storage Lanes	1	1	2	2	2
Taper Length (ft)	230	100	100	100	25
Lane Util. Factor	0.95	1.00	0.97	0.95	0.88
Flt Protected	0.850				0.850
Satd. Flow (prot)	3539	1583	3433	3539	3433
Flt Permitted	0.950				0.950
Satd. Flow (perm)	3539	1583	3433	3539	3433
Right Turn on Red	No				Yes
Satd. Flow (RTOR)					135
Link Speed (mph)	45		45		35
Link Distance (ft)	314		610		338
Travel Time (s)	4.8		9.2		6.6
Peak Hour Factor	0.98	0.98	0.95	0.95	0.85
Adj. Flow (vph)	986	616	427	1057	314
Shared Lane Traffic (%)					813
Lane Group Flow (vph)	986	616	427	1057	314
Enter Blocked Intersection	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Right
Median Width(ft)	12		24		24
Link Offset(ft)	0		0		0
Crosswalk Width(ft)	16		16		16
Two way Left Turn Lane					
Headway Factor	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		15	9
Number of Detectors	2	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left
Leading Detector (ft)	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0
Detector 1 Size(ft)	6	20	20	6	20
Detector 1 Type	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 1 Channel					
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94				94
Detector 2 Size(ft)	6				6
Detector 2 Type	Ch+Ex				Ch+Ex
Detector 2 Channel					
Detector 2 Extend (s)	0.0				0.0
Turn Type		pm+ov	Prot		pm+ov
Protected Phases	2	3	1	6	3
Permitted Phases	2	3	1	6	3
Detector Phase	2	3	1	6	3

Lanes, Volumes, Timings
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
13: Sheridan Drive & Harlem Road

4/24/2014

Lane Group	EBT	WBL	WBT	NBL	NBR
Switch Phase	↔	↔	↔	↔	↔
Minimum Initial (s)	1.0	1.0	1.0	4.0	1.0
Minimum Split (s)	30.5	6.2	5.3	32.3	6.2
Total Split (s)	60.0	25.0	25.0	85.0	25.0
Total Split (%)	54.5%	22.7%	22.7%	77.3%	22.7%
Maximum Green (s)	54.5	19.8	20.7	80.7	19.8
Yellow Time (s)	3.9	3.2	3.2	3.2	3.2
All-Red Time (s)	1.6	2.0	1.1	2.0	1.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.2	4.3	4.3	5.2
Lead/Lag	Lag	Lead	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0
Recall Mode	C-Max	None	None	None	None
Walk Time (s)	7.0		7.0		7.0
Flash Dont Walk (s)	18.0		21.0		18.0
Pedestrian Calls (#/hr)	0		0		0
Act Effct Green (s)	62.1	82.3	18.2	85.8	14.7
Actuated g/C Ratio	0.56	0.75	0.17	0.78	0.13
v/c Ratio	0.49	0.52	0.75	0.38	0.68
Control Delay	16.5	8.0	52.5	4.5	53.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	16.5	8.0	52.5	4.5	53.0
LOS	B	A	D	A	D
Approach Delay	13.2		18.3		37.3
Approach LOS	B		B		D



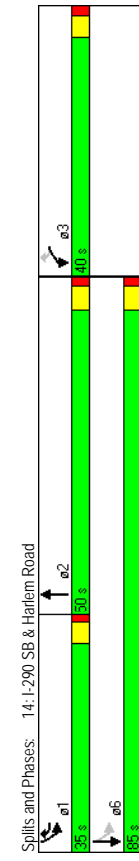
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
14: 1-290 SB & Harlem Road
4/24/2014

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↕	↕	↔	↔
Volume (vph)	234	361	562	11	483	491
Ideal Flow (vpph)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	0	0	330	0
Storage Lanes	1	1	0	0	1	0
Taper Length (ft)	25	25	25	25	75	25
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	3529	0	1770	3539
Flt Permitted	0.950				0.169	
Satd. Flow (perm)	1770	1583	3529	0	315	3539
Right Turn on Red	Yes	Yes	Yes	Yes		
Satd. Flow (RTOR)	73	2				
Link Speed (mph)	30	35				35
Link Distance (ft)	333	250				456
Travel Time (s)	7.6	4.9				8.9
Peak Hour Factor	0.69	0.69	0.77	0.77	0.92	0.92
Adj. Flow (vph)	339	523	730	14	525	534
Shared Lane Traffic (%)						
Lane Group Flow (vph)	339	523	744	0	525	534
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12	12			12	12
Link Offset(ft)	0	0			0	0
Crosswalk Width(ft)	16	16			16	16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru	Left	Thru	
Leading Detector (ft)	20	20	100	20	100	
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	6	6
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			CI+EX			CI+EX
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type		pm+ov			pm+pl	
Protected Phases	3	1	2	1	1	6
Permitted Phases		3			6	
Detector Phase	3	1	2	1	1	6

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
14: 1-290 SB & Harlem Road
4/24/2014

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Switch Phase	↔	↔	↕	↕	↔	↔
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	9.2	30.6	9.2	21.0	
Total Split (s)	40.0	35.0	50.0	0.0	35.0	85.0
Total Split (%)	32.0%	28.0%	40.0%	0.0%	28.0%	68.0%
Maximum Green (s)	35.2	30.7	45.0		30.7	80.0
Yellow Time (s)	3.2	3.2	3.6		3.2	3.6
All-Red Time (s)	1.6	1.1	1.4		1.1	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.8	4.3	5.0	4.0	4.3	5.0
Lead/Lag	Lead	Lead	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Min	None	None	None
Walk Time (s)			10.0			
Flash Dont Walk (s)			15.0			
Pedestrian Calls (#/hr)			0			
Act Effct Green (s)	23.4	54.5	26.8		58.1	57.4
Actuated g/C Ratio	0.26	0.60	0.29		0.64	0.63
v/c Ratio	0.75	0.54	0.72		0.85	0.24
Control Delay	43.9	12.0	34.2		34.2	8.1
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	43.9	12.0	34.2		34.2	8.1
LOS	D	B	C		C	A
Approach Delay	24.6		34.2			21.0
Approach LOS	C		C			C



Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
17: Proposed Access Driveway & Frankhauser Road

4/24/2014

	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Volume (vph)	14	3	75	3	0	92
Ideal Flow (vpph)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.978		0.995			
Satd. Flow (prot)	0.960					
Flt Permitted	1749	0	1853	0	0	1863
Satd. Flow (perm)	0.960					
Link Speed (mph)	1749	0	1853	0	0	1863
Link Distance (ft)	30		30			30
Travel Time (s)	2.36		828			109
Peak Hour Factor	5.4		18.8			2.5
Adj. Flow (vph)	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)	15	3	82	3	0	100
Lane Group Flow (vph)	18	0	85	0	0	100
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	Free	9	15	Free
Sign Control	Stop	Free	Free	Free	Free	Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	14.8%					
Analysis Period (min)	15					
ICU Level of Service	A					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
17: Proposed Access Driveway & Frankhauser Road

4/24/2014

	WBL	WBR	NBT	NBR	SBL	SBT
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Volume (veh/h)	14	3	75	3	0	92
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	15	3	82	3	0	100
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None		None			None
Median storage (veh)						
Upstream signal (ft)			828			
pX, platoon unblocked						
VC, conflicting volume	183	83				85
VC1, stage 1 cont vol						
VC2, stage 2 cont vol						
vCu, unblocked vol	183	83				85
IC, single (s)	6.4	6.2				4.1
IC, 2 stage (s)						
IF (s)	3.5	3.3				2.2
p0 queue free %	98	100				100
cM capacity (veh/h)	806	976				1512
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	18	85	100			
Volume Left	15	0	0			
Volume Right	3	3	0			
cSH	832	1700	1512			
Volume to Capacity	0.02	0.05	0.00			
Queue Length 95th (ft)	2	0	0			
Control Delay (s)	9.4	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	9.4	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay	0.9					
Intersection Capacity Utilization	14.8%					
ICU Level of Service	A					
Analysis Period (min)	15					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
56: Maple Road & Proposed North Driveway 4/24/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔	↔↔	↔↔	↔	↔
Volume (vph)	1299	23	30	981	21	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	225	0	150	0	150
Storage Lanes	0	1	1	1	1	1
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Flt Protected	0.997		0.950		0.950	0.850
Satd. Flow (prot)	3529	0	1770	3539	1770	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3529	0	1770	3539	1770	1583
Link Speed (mph)	45		45		30	
Link Distance (ft)	1000		928		337	
Travel Time (s)	15.2		14.1		7.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1412	25	33	1066	23	35
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1437	0	33	1066	23	35
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12		12		12	
Link Offset(ft)	0		0		0	
Crosswalk Width(ft)	16		16		16	
Two way Left Turn Lane	Yes		Yes		Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9		15		15	
Sign Control	Free		Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	46.6%					
Analysis Period (min)	15					
	ICU Level of Service: A					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
56: Maple Road & Proposed North Driveway 4/24/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔	↔↔	↔↔	↔	↔
Volume (veh/h)	1299	23	30	981	21	32
Sign Control	Free		Free		Stop	
Grade	0%		0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1412	25	33	1066	23	35
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)					6	
Median type			TWLTL			
Median storage (veh)	2			2		
Upstream signal (ft)						
pX, platoon unblocked			1437		2023	718
vC, conflicting volume					1424	
vC1, stage 1 conf vol					598	
vC2, stage 2 conf vol			1437		2023	718
vCu, unblocked vol			4.1		6.8	6.9
IC, 2 stage (s)					5.8	
IF (s)			2.2		3.5	3.3
p0 queue free %			93		87	91
cM capacity (veh/h)			468		173	371
Direction, Lane #						
	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	941	496	33	533	533	58
Volume Left	0	0	33	0	0	23
Volume Right	0	25	0	0	0	35
cSH	1700	1700	468	1700	1700	437
Volume to Capacity	0.55	0.29	0.07	0.31	0.31	0.13
Queue Length 95th (ft)	0	0	6	0	0	11
Control Delay (s)	0.0	0.0	13.3	0.0	0.0	20.9
Lane LOS			B			C
Approach Delay (s)	0.0		0.4			20.9
Approach LOS						C
Intersection Summary						
Average Delay	0.6					
Intersection Capacity Utilization	46.6%					
Analysis Period (min)	15					
	ICU Level of Service: A					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
59: Sheridan Drive & Proposed Access Driveway

4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	50	1668	1596	37	29	53
Volume (vph)	1900	1900	1900	1900	1900	1900
Ideal Flow (vpph)	75	0	0	0	0	0
Storage Length (ft)	1	0	1	1	1	1
Storage Lanes	25	25	25	25	25	25
Taper Length (ft)	1.00	0.95	0.95	1.00	1.00	1.00
Lane Util. Factor	0.997					0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	3539	3529	0	1770	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	3539	3529	0	1770	1583
Link Speed (mph)	45	45	45	30	30	30
Link Distance (ft)	230	1438	280			
Travel Time (s)	3.5	21.8	6.4			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	54	1813	1735	40	32	58
Shared Lane Traffic (%)						
Lane Group Flow (vph)	54	1813	1775	0	32	58
Enter Blocked Intersection	No	Yes	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	Free	Free	Free	Free	Stop
Sign Control	Free	Free	Free	Free	Free	Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	56.1%					
Analysis Period (min)	15					
ICU Level of Service:	B					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
59: Sheridan Drive & Proposed Access Driveway

4/24/2014

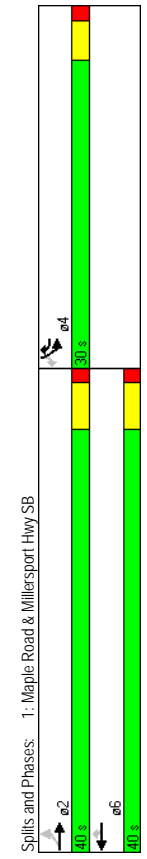
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	50	1668	1596	37	29	53
Volume (veh/h)	1900	1900	1900	1900	1900	1900
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	54	1813	1735	40	32	58
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL TWLTL					
Median storage (veh)	2 2					
Upstream signal (ft)	865					
pX, platoon unblocked	0.74					
vC, conflicting volume	1775				2770	888
vC1, stage 1 cont vol					1755	
vC2, stage 2 cont vol					1015	
vCu, unblocked vol	1775				2687	888
IC, single (s)	4.1				6.8	6.9
IC, 2 stage (s)					5.8	
IF (s)	2.2				3.5	3.3
p0 queue free %	84				73	80
cM capacity (veh/h)	346				116	287
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1 SB 2
Volume Total	54	907	907	1157	618	32 58
Volume Left	54	0	0	0	0	32 0
Volume Right	0	0	0	0	40	0 58
cSH	346	1700	1700	1700	1700	116 287
Volume to Capacity	0.16	0.53	0.53	0.68	0.36	0.27 0.20
Queue Length 95th (ft)	14	0	0	0	0	26 18
Control Delay (s)	17.3	0.0	0.0	0.0	0.0	47.4 20.7
Lane LOS	C					E C
Approach Delay (s)	0.5			0.0		30.1
Approach LOS				D		
Intersection Summary						
Average Delay	1.0					
Intersection Capacity Utilization	56.1%					
ICU Level of Service	B					
Analysis Period (min)	15					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
1: Maple Road & Millersport Hwy SB
4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (vph)	18	568	803	309	27	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	0	0	0	0	0
Storage Lanes	1	1	1	1	1	1
Taper Length (ft)	35	100	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00
Flt Protected	0.950			0.850	0.850	
Satd. Flow (prot)	1770	3539	3539	1583	1770	1583
Flt Permitted	0.334			0.950		
Satd. Flow (perm)	622	3539	3539	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)						106
Link Speed (mph)	45	45			30	
Link Distance (ft)	555	654			281	
Travel Time (s)	8.4	9.9			6.4	
Peak Hour Factor	0.91	0.91	0.96	0.96	0.78	0.78
Adj. Flow (vph)	20	624	836	322	35	106
Shared Lane Traffic (%)						
Lane Group Flow (vph)	20	624	836	322	35	106
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Right	Left	Right
Median Width(ft)	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16
Two way Left Turn Lane		Yes				
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	15	15	15	15	15
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94	94	94			
Detector 2 Size(ft)	6	6	6			
Detector 2 Type	CI+EX	CI+EX				
Detector 2 Channel						
Detector 2 Extend (s)	0.0	0.0				
Turn Type	Perm			pm+ov		Perm
Protected Phases	2	6	4	4		
Permitted Phases	2	2	6	4	4	4
Detector Phase	2	2	6	4	4	4

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
1: Maple Road & Millersport Hwy SB
4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	1.0	1.0	1.0
Minimum Split (s)	9.1	9.1	9.1	6.2	6.2	6.2
Total Split (s)	40.0	40.0	40.0	30.0	30.0	30.0
Total Split (%)	57.1%	57.1%	57.1%	42.9%	42.9%	42.9%
Maximum Green (s)	34.9	34.9	34.9	25.4	25.4	25.4
Yellow Time (s)	3.9	3.9	3.9	3.2	3.2	3.2
All-Red Time (s)	1.2	1.2	1.2	1.4	1.4	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	4.6	4.6	4.6
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Min	C-Min	C-Min	None	None	None
Act Effct Green (s)	52.8	52.8	52.8	7.0	7.5	7.5
Actuated g/C Ratio	0.75	0.75	0.75	1.00	0.11	0.11
v/c Ratio	0.04	0.23	0.31	0.20	0.18	0.40
Control Delay	2.9	3.0	5.4	0.3	29.9	11.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.9	3.0	5.4	0.3	29.9	11.4
LOS	A	A	A	A	C	B
Approach Delay						
Approach LOS	A	A	A	A	B	B
Intersection Summary						
Area Type:	Other					
Cycle Length:	70					
Offset:	5 (7%), Referenced to phase 2:EBTL and 6:WBT. Start of Green					
Natural Cycle:	40					
Control Type:	Actuated-Coordinated					
Maximum v/c Ratio:	0.40					
Intersection Signal Delay:	4.5					
Intersection LOS:	A					
Intersection Capacity Utilization:	35.4%					
Analysis Period (min):	15					



Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
2: Maple Road & Millersport Hwy NB
4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	42	552	0	0	965	54	147	1	464	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	0	0	0	0	0	0	0	0	0
Storage Lanes	1	0	0	0	0	1	0	0	0	0	0
Taper Length (ft)	50	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.950				0.992		0.950		0.850		
Satd. Flow (prot)	1770	3539	0	0	3511	0	1770	1583	0	0	0
Flt Permitted	0.202				0.950		0.950				
Satd. Flow (perm)	376	3539	0	0	3511	0	1770	1583	0	0	0
Right Turn on Red		Yes			Yes		Yes	Yes	Yes		Yes
Satd. Flow (RTOR)		45			11		198				30
Link Speed (mph)		654			1770		319				263
Link Distance (ft)		9.9			26.8		7.3				6.0
Travel Time (s)		0.85			0.93		0.93				0.92
Peak Hour Factor		0.85			0.93		0.93				0.92
Adj. Flow (vph)		49			649		0				0
Shared Lane Traffic (%)		49			649		58				158
Lane Group Flow (vph)		49			649		0				500
Enter Blocked Intersection		No			No		No				No
Lane Alignment		Left			Left		Left				Left
Median Width(ft)		12			12		12				12
Link Offset(ft)		0			0		0				0
Crosswalk Width(ft)		16			16		16				16
Two way Left Turn Lane		Yes			Yes		Yes				Yes
Headway Factor		1.00			1.00		1.00				1.00
Turning Speed (mph)		15			9		15				9
Number of Detectors		1			2		1				2
Detector Template		Left			Thru		Left				Thru
Leading Detector (ft)		20			100		20				100
Trailing Detector (ft)		0			0		0				0
Detector 1 Position(ft)		0			0		0				0
Detector 1 Size(ft)		20			6		20				6
Detector 1 Type		Ch+Ex			Ch+Ex		Ch+Ex				Ch+Ex
Detector 1 Channel											
Detector 1 Extend (s)		0.0			0.0		0.0				0.0
Detector 1 Queue (s)		0.0			0.0		0.0				0.0
Detector 1 Delay (s)		0.0			0.0		0.0				0.0
Detector 2 Position(ft)		94			94		94				94
Detector 2 Size(ft)		6			6		6				6
Detector 2 Type		Ch+Ex			Ch+Ex		Ch+Ex				Ch+Ex
Detector 2 Channel											
Detector 2 Extend (s)		0.0			0.0		0.0				0.0
Turn Type		Perm			Perm		Perm				Perm
Protected Phases		2			6		8				8
Permitted Phases		2			6		8				8
Detector Phase		2			6		8				8

Lanes, Volumes, Timings
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Alternative 2
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
2: Maple Road & Millersport Hwy NB
4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	1.0	1.0	1.0	4.0	4.0	4.0	1.0	1.0	1.0	1.0	1.0
Minimum Split (s)	6.1	6.1	6.1	9.1	9.1	9.1	6.2	6.2	6.2	6.2	6.2
Total Split (s)	40.0	40.0	40.0	0.0	0.0	0.0	30.0	30.0	30.0	30.0	30.0
Total Split (%)	57.1%	57.1%	57.1%	0.0%	0.0%	0.0%	42.9%	42.9%	42.9%	42.9%	42.9%
Maximum Green (s)	34.9	34.9	34.9	34.9	34.9	34.9	25.4	25.4	25.4	25.4	25.4
Yellow Time (s)	3.9	3.9	3.9	3.9	3.9	3.9	3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.2	1.2	1.2	1.2	1.2	1.2	1.4	1.4	1.4	1.4	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time (s)	5.1	5.1	5.1	4.0	4.0	4.0	4.6	4.6	4.6	4.6	4.6
Total Lost Time (s)	5.1	5.1	5.1	4.0	4.0	4.0	4.6	4.6	4.6	4.6	4.6
Lead-Lag											
Lead-Lag Optimize?											
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	None	None	None	None	None
Recall Mode	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	40.1	40.1	40.1	40.1	40.1	40.1	20.2	20.2	20.2	20.2	20.2
Actuated g/C Ratio	0.57	0.57	0.57	0.57	0.57	0.57	0.29	0.29	0.29	0.29	0.29
v/c Ratio	0.23	0.32	0.32	0.54	0.54	0.54	0.31	0.31	0.31	0.31	0.31
Control Delay	14.2	9.8	9.8	11.7	11.7	11.7	19.4	19.4	19.4	19.4	19.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.2	9.8	9.8	11.7	11.7	11.7	19.4	19.4	19.4	19.4	19.4
LOS	B	A	A	B	B	B	B	B	B	B	C
Approach Delay	10.1	10.1	10.1	11.7	11.7	11.7	24.6	24.6	24.6	24.6	24.6
Approach LOS	B	B	B	B	B	B	C	C	C	C	C
Intersection Summary											
Area Type:	Other										
Cycle Length:	70										
Actuated Cycle Length:	70										
Offset:	5 (7%), Referenced to phase 2:EBTL and 6:WBT, Start of Green										
Natural Cycle:	45										
Control Type:	Actuated-Coordinated										
Maximum v/c Ratio:	0.84										
Intersection Signal Delay:	14.7										
Intersection LOS:	B										
Intersection Capacity Utilization:	71.8%										
Analysis Period (min):	15										
ICU Level of Service:	C										
Splits and Phases:	2: Maple Road & Millersport Hwy NB										



Lanes, Volumes, Timings
SRF & Associates
Alternative 2
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
 3: Maple Road & Maplemere Road

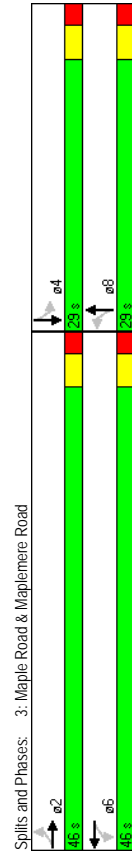
4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	21	881	46	12	1006	28	47	3	16	34	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	0	70	0	0	0	0	0	0	0
Storage Lanes	1	0	1	0	0	0	0	0	0	0	0
Taper Length (ft)	50	25	50	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Fit	0.993			0.996				0.967			0.957
Flt Permitted	0.950		0.950					0.966			0.967
Satd. Flow (prot)	1770	3514	0	1770	3525	0	1740	0	1740	0	1724
Satd. Flow (perm)	0.215	0.235		0.235				0.735			0.730
Right Turn on Red	400	3514	0	438	3525	0	1324	0	1301	0	1301
Satd. Flow (RTOR)	11			6			23		23		28
Link Speed (mph)	45			45			30		30		30
Link Distance (ft)	1770			1106			378		378		402
Travel Time (s)	26.8			16.8			8.6		8.6		9.1
Peak Hour Factor	0.86	0.86	0.86	0.91	0.91	0.91	0.60	0.60	0.60	0.58	0.58
Adj. Flow (vph)	24	1024	53	13	1105	31	78	5	27	59	0
Shared Lane Traffic (%)											
Lane Group Flow (vph)	24	1077	0	13	1136	0	0	110	0	0	87
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	12			12			0		0		0
Link Offset(ft)	0			0			0		0		0
Crosswalk Width(ft)	16			16			16		16		16
Two way Left Turn Lane	Yes			Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15	15
Number of Detectors	1	2	1	2	1	2	1	2	1	2	1
Detector Template	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Thru
Leading Detector (ft)	20	100	20	100	20	100	20	100	20	100	100
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	6	20	6	20	6	20	6	6
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94			94		94		94
Detector 2 Size(ft)	6			6			6		6		6
Detector 2 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 2 Channel											
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm
Protected Phases	2			6			8		8		4
Permitted Phases	2			6			8		8		4
Detector Phase	2			6			8		8		4

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
 3: Maple Road & Maplemere Road

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	9.0	9.0	9.0	9.0	9.0	27.0	27.0	27.0	27.0	27.0
Total Split (s)	46.0	46.0	0.0	46.0	46.0	0.0	29.0	29.0	0.0	29.0	29.0
Total Split (%)	61.3%	61.3%	0.0%	61.3%	61.3%	0.0%	38.7%	38.7%	0.0%	38.7%	38.7%
Maximum Green (s)	41.0	41.0	41.0	41.0	41.0	41.0	24.0	24.0	24.0	24.0	24.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Lead-Lag Optimize?											
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	None	None	None	None	None
Recall Mode	Min	Min	Min	Min	Min	Min	None	None	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	15.0	15.0	15.0	15.0	15.0
Flash Dont Walk (s)											
Pedestrian Calls (#/hr)							0	0	0	0	0
Act Effct Green (s)	26.3	26.3	26.3	26.3	26.3	26.3	8.6	8.6	8.6	8.6	8.6
Actuated g/C Ratio	0.64	0.64	0.64	0.64	0.64	0.64	0.21	0.21	0.21	0.20	0.20
v/c Ratio	0.09	0.48	0.05	0.50	0.50	0.37					
Control Delay	6.3	6.6	5.5	6.8	6.6	16.6					
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0					
Total Delay	6.3	6.6	5.5	6.8	6.6	16.6					
LOS	A	A	A	A	A	A	B	B	B	B	B
Approach Delay	6.6			6.8			16.6		16.6		14.2
Approach LOS	A			A			B		B		B
Intersection Summary	Other										
Area Type:	Other										
Cycle Length:	75										
Actuated Cycle Length:	41										
Natural Cycle:	55										
Control Type:	Actuated-Uncoordinated										
Maximum v/c Ratio:	0.50										
Intersection Signal Delay:	7.4										
Intersection Capacity Utilization:	41.4%										
Analysis Period (min):	15										



Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
4: Maple Road & Donna Lea Blvd

4/24/2014

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔	↔	↔↔	↔	↔
Volume (veh/h)	926	6	13	1021	24	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	50	0	0	0	0
Storage Lanes	0	1	0	1	0	0
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Flt Protected	0.999		0.950		0.904	
Flt Permitted			0.986		0.986	
Satd. Flow (prot)	3536	0	1770	3539	1660	0
Satd. Flow (perm)	3536	0	1770	3539	1660	0
Link Speed (mph)	45		45		30	
Link Distance (ft)	1106		1002		355	
Travel Time (s)	16.8		15.2		8.1	
Peak Hour Factor	0.79	0.79	0.87	0.87	0.76	0.76
Adj. Flow (vph)	1172	8	15	1174	32	80
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1180	0	15	1174	112	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12		12		12	
Link Offset(ft)	0		0		0	
Crosswalk Width(ft)	16		16		16	
Two way Left Turn Lane	Yes		Yes			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15	15	15	15	9
Sign Control	Free	Free	Free	Free	Stop	Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	40.0%					
Analysis Period (min)	15					
ICU Level of Service:	A					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
4: Maple Road & Donna Lea Blvd

4/24/2014

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔	↔	↔↔	↔	↔
Volume (veh/h)	926	6	13	1021	24	61
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%		0%		0%	
Peak Hour Factor	0.79	0.79	0.87	0.87	0.76	0.76
Hourly flow rate (vph)	1172	8	15	1174	32	80
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			TWLTL			
Median storage (veh)	2			2		
Upstream signal (ft)	1106					
pX, platoon unblocked			0.87		0.87	0.87
vC, conflicting volume			1180		1793	590
vC1, stage 1 conf vol					1176	
vC2, stage 2 conf vol					617	
vCu, unblocked vol			902		1608	222
IC, single (s)			4.1		6.8	6.9
IC, 2 stage (s)					5.8	
IF (s)			2.2		3.5	3.3
p0 queue free %			98		88	88
cM capacity (veh/h)			650		266	678
Direction, Lane #						
EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	NB 2
781	398	15	587	587	112	
Volume Total	0	0	15	0	0	32
Volume Left	0	8	0	0	0	80
Volume Right	1700	1700	650	1700	1700	472
cSH	0.46	0.23	0.02	0.35	0.35	0.24
Volume to Capacity	0	0	2	0	0	23
Queue Length 95th (ft)	0.0	0.0	10.7	0.0	0.0	15.0
Control Delay (s)	0.0	0.0	0.1	0.0	0.0	15.0
Lane LOS			B			B
Approach Delay (s)	0.0		0.1			15.0
Approach LOS			B			B
Intersection Summary						
Average Delay	0.7					
Intersection Capacity Utilization	40.0%					
ICU Level of Service	A					
Analysis Period (min)	15					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
5: Maple Road & Audubon Golf Club

4/24/2014



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	1	1010	4	1	1027	2	13	0	0	3	1
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	100	0	50	0	50	0	0	0	0	0	0
Storage Length (ft)	1	0	1	0	1	0	0	0	0	0	0
Storage Lanes	25	25	25	25	25	25	25	25	25	25	25
Taper Length (ft)	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.999						0.976				
Flt Protected	0.950			0.950			0.960				0.950
Satd. Flow (prot)	1770	3536	0	1770	3539	0	1745	0	1745	0	1770
Flt Permitted	0.950			0.950			0.960				0.950
Satd. Flow (perm)	1770	3536	0	1770	3539	0	1745	0	1745	0	1770
Link Speed (mph)	45	45	45	45	45	45	30	30	30	30	30
Link Distance (ft)	446	446	446	446	446	446	469	469	469	469	111
Travel Time (s)	6.8	6.8	6.8	6.8	6.8	6.8	10.7	10.7	10.7	10.7	2.5
Adj. Flow (vph)	1	1098	4	1	1116	2	14	0	3	1	0
Shared Lane Traffic (%)											
Lane Group Flow (vph)	1	1102	0	1	1118	0	17	0	17	0	1
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Right
Median Width (ft)	12	12	12	12	12	12	0	0	0	0	0
Link Offset (ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width (ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane	Yes			Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9	15	15	9	15	9
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	38.5%
Analysis Period (min)	15
ICU Level of Service:	A

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
5: Maple Road & Audubon Golf Club

4/24/2014



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	1	1010	4	1	1027	2	13	0	3	1	0
Volume (veh/h)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	1098	4	1	1116	2	14	0	3	1	0
Pedestrians											
Lane Width (ft)											
Walking Speed (ft/s)											
Percent Blockage											
Right turn flare (veh)											
Median type											
Median storage (veh)											
Upstream signal (ft)											
pX, platoon unblocked											
vC, conflicting volume	1118			1102			1662	2223	551	1674	2224
vC1, stage 1 cont vol							1102	1102	1120	1120	1120
vC2, stage 2 cont vol							560	1121	554	1104	1104
vCu, unblocked vol	1118			1102			1662	2223	551	1674	2224
IC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5
IC, 2 stage (s)							6.5	5.5	6.5	6.5	5.5
IF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0
p0 queue free %	100			100			93	100	99	100	100
cM capacity (veh/h)	620			629			204	197	478	200	197
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1			
Volume Total	1	732	370	1	744	374	17	1			
Volume Left	1	0	0	1	0	0	14	1			
Volume Right	0	0	4	0	0	2	3	0			
cSH	620	1700	1700	629	1700	1700	229	200			
Volume to Capacity	0.00	0.43	0.22	0.00	0.44	0.22	0.08	0.01			
Queue Length 95th (ft)	0	0	0	0	0	0	6	0			
Control Delay (s)	10.8	0.0	0.0	10.7	0.0	0.0	22.0	23.1			
Lane LOS	B			B			C	C			
Approach Delay (s)	0.0			0.0			22.0	23.1			
Approach LOS				C			C	C			

Intersection Summary	
Average Delay	0.2
Intersection Capacity Utilization	38.5%
Analysis Period (min)	15
ICU Level of Service:	A

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
6: Maple Road & North Forest Road

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
6: Maple Road & North Forest Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	1.0	4.0	1.0	1.0	4.0	1.0	1.0	4.0	1.0	1.0	4.0
Minimum Split (s)	7.0	35.0	7.0	7.0	35.0	7.0	7.0	35.0	7.0	7.0	35.0
Total Split (s)	13.0	45.0	10.0	23.0	55.0	15.0	10.0	37.0	23.0	15.0	42.0
Total Split (%)	10.8%	37.5%	8.3%	19.2%	45.8%	12.5%	8.3%	30.8%	19.2%	12.5%	35.0%
Maximum Green (s)	7.0	39.0	4.0	17.0	49.0	9.0	4.0	31.0	17.0	9.0	36.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Walk Time (s)	7.0										7.0
Flash Dont Walk (s)	22.0										22.0
Pedestrian Calls (#/hr)	0										0
Act Effct Green (s)	39.9	32.9	43.2	53.6	41.0	56.0	29.0	24.9	46.0	38.6	29.7
Actuated g/C Ratio	0.38	0.31	0.41	0.50	0.39	0.53	0.27	0.23	0.43	0.36	0.28
v/c Ratio	0.35	0.83	0.12	0.82	0.59	1.11	0.61	0.59	0.29	0.46	0.85
Control Delay	19.2	42.4	5.2	47.2	28.1	13.8	45.0	43.3	15.4	29.1	53.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.2	42.4	5.2	47.2	28.1	13.8	45.0	43.3	15.4	29.1	53.9
LOS	B	D	A	D	C	B	D	D	B	C	D
Approach Delay	37.5										38.9
Approach LOS	D										D
Intersection Summary											
Area Type:	Other										
Cycle Length:	120										
Actuated Cycle Length:	106.3										
Natural Cycle:	85										
Control Type:	Actuated-Uncoordinated										
Maximum v/c Ratio:	0.85										
Intersection Signal Delay:	35.2										
Intersection Capacity Utilization:	80.3%										
Analysis Period (min):	15										

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	87	822	77	250	764	90	90	231	186	123	356
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	415	220	315	220	315	220	250	250	250	250	250
Storage Length (ft)	1	1	1	1	1	1	1	1	1	1	1
Taper Length (ft)	90	115	60	25	95	25	90	25	90	25	90
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Flt Permitted	0.950			0.950			0.950			0.950	0.850
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1863	1583	1770	1863
Satd. Flow (perm)	0.286			0.103			0.217			0.352	
Right Turn on Red	533	3539	1583	192	3539	1583	404	1863	1583	656	1863
Satd. Flow (RTOR)		86							57		95
Link Speed (mph)	45			45			35		35		35
Link Distance (ft)	1705			820			529		608		608
Travel Time (s)	25.8			12.4			10.3		11.8		11.8
Peak Hour Factor	0.90	0.90	0.90	0.95	0.95	0.95	0.90	0.90	0.90	0.90	0.80
Adj. Flow (vph)	97	913	86	263	804	95	100	257	207	154	445
Shared Lane Traffic (%)											201
Lane Group Flow (vph)	97	913	86	263	804	95	100	257	207	154	445
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Left	Right	Left	Right
Median Width (ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset (ft)	0	16	0	16	0	16	0	16	0	16	0
Crosswalk Width (ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane	Yes										
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9	15	9	15	9	15
Number of Detectors	1	2	1	2	1	2	1	2	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru
Leading Detector (ft)	20	100	20	100	20	100	20	100	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size (ft)	20	6	20	6	20	6	20	6	20	6	20
Detector 1 Type	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position (ft)	94			94			94			94	
Detector 2 Size (ft)	6			6			6			6	
Detector 2 Type	Ch+Ex			Ch+Ex			Ch+Ex			Ch+Ex	
Detector 2 Channel											
Detector 2 Extend (s)	0.0			0.0			0.0			0.0	
Turn Type	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+ov
Protected Phases	5	2	3	1	6	7	3	8	1	7	4
Permitted Phases	2	2	2	6	6	6	8	8	4	4	4
Detector Phase	5	2	3	1	6	7	3	8	1	7	4



Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
7: Sheridan Drive & Mill Street

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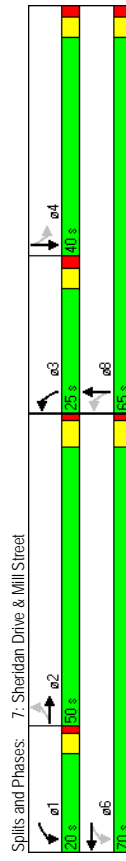
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	5	1301	126	220	976	9	100	21	125	30	146
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	100	0	150	0	150	0	40	0	75	0	75
Storage Length (ft)	1	0	1	0	1	0	1	0	1	0	1
Storage Lanes	65	25	60	25	60	25	25	25	25	25	25
Taper Length (ft)	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.987			0.999			0.872			0.986	
Flt Protected	0.950			0.950			0.950			0.950	
Satd. Flow (prot)	1770	3493	0	1770	3536	0	1770	1624	0	1770	1837
Flt Permitted	0.258			0.080			0.234			0.598	
Satd. Flow (perm)	481	3493	0	149	3536	0	436	1624	0	1114	1837
Right Turn on Red			No			Yes			No		Yes
Satd. Flow (RTOR)				1							4
Link Speed (mph)	45			45			30				30
Link Distance (ft)	2782			977			838				362
Travel Time (s)	42.2			14.8			19.0				8.2
Peak Hour Factor	0.86	0.86	0.86	0.89	0.89	0.89	0.56	0.56	0.56	0.61	0.61
Adj. Flow (vph)	6	1513	147	247	1097	10	179	38	223	49	239
Shared Lane Traffic (%)											25
Lane Group Flow (vph)	6	1660	0	247	1107	0	179	261	0	49	264
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset(ft)	0			0			0			0	0
Crosswalk Width(ft)	16			16			16			16	16
Two way Left Turn Lane	Yes			Yes			Yes			Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	15	9	15	15	9	15	15	9
Number of Detectors	1	2	1	2	1	2	1	2	1	2	1
Detector Template	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left
Leading Detector (ft)	20	100	20	100	20	100	20	100	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	6	20	6	20	6	20	6	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94	0	0	94	0	0	94	0	0	94	0
Detector 2 Size(ft)	6	6	6	6	6	6	6	6	6	6	6
Detector 2 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 2 Channel											
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm			pm+pt			pm+pt			Perm	
Protected Phases	2	1	6	6	3	8	8	4	4	4	4
Permitted Phases	2	2	1	6	3	8	8	4	4	4	4
Detector Phase	2	2	1	6	3	8	8	4	4	4	4

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
7: Sheridan Drive & Mill Street

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase	4.0	4.0	1.0	4.0	4.0	1.0	4.0	4.0	4.0	4.0	4.0
Minimum Initial (s)	28.3	28.3	6.2	28.3	6.2	28.3	6.2	34.2	34.2	34.2	34.2
Minimum Split (s)	50.0	50.0	0.0	20.0	70.0	0.0	25.0	65.0	0.0	40.0	40.0
Total Split (s)	37.0%	37.0%	0.0%	14.8%	51.9%	0.0%	18.5%	48.1%	0.0%	29.6%	29.6%
Total Split (%)	44.5	44.5	15.7	64.5	19.8	59.8	34.8	34.8	34.8	34.8	34.8
Maximum Green (s)	4.3	4.3	3.2	4.3	3.2	4.3	3.2	3.2	3.2	3.2	3.2
Yellow Time (s)	1.2	1.2	1.1	1.2	1.1	1.2	2.0	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	5.5	5.5	4.0	4.3	5.5	4.0	5.2	5.2	4.0	5.2	5.2
Total Lost Time (s)	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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
Recall Mode	Max	Max	None	Max	None	Max	None	None	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0	15.0	15.0	15.0	15.0	22.0	22.0	22.0	22.0	22.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0	0	0	0
Act Effct Green (s)	45.4	45.4	66.1	64.9	40.7	40.7	40.7	40.7	21.6	21.6	21.6
Actuated g/C Ratio	0.39	0.39	0.57	0.56	0.35	0.35	0.35	0.35	0.19	0.19	0.19
v/c Ratio	0.03	1.22	0.83	0.56	0.58	0.46	0.24	0.46	0.24	0.77	0.77
Control Delay	27.4	138.0	53.0	19.3	34.2	31.5	34.2	31.5	43.4	59.7	59.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.4	138.0	53.0	19.3	34.2	31.5	34.2	31.5	43.4	59.7	59.7
LOS	C	F	D	B	C	C	C	C	D	D	E
Approach Delay	137.6		25.4								
Approach LOS	F		C								
Intersection Summary											
Area Type:	Other										
Cycle Length:	135										
Actuated Cycle Length:	116.3										
Natural Cycle:	140										
Control Type:	Semi Act-Uncoord										
Maximum v/c Ratio:	1.22										
Intersection Signal Delay:	78.4										
Intersection Capacity Utilization:	83.1%										
Analysis Period (min):	15										



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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
8: Sheridan Drive & North Forest Road

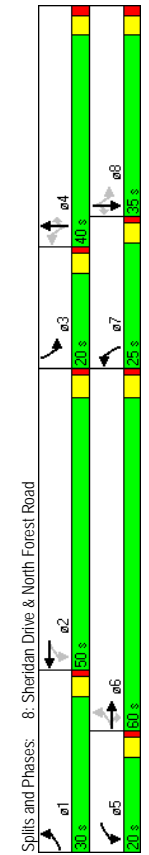
4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	90	1310	207	181	1026	20	210	340	23	21	441
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	405	170	260	0	265	180	200	200	200	200	200
Storage Lanes	1	1	1	0	1	1	1	1	1	1	1
Taper Length (ft)	200	25	200	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95
Flt	0.850	0.850	0.997		0.850		0.850		0.850		0.850
Flt Protected	0.950		0.950		0.950		0.950		0.950		0.950
Satd. Flow (prot)	1770	3539	1583	1770	3529	0	1770	1863	1583	1770	3539
Flt Permitted	0.129		0.067		0.067		0.191		0.433		0.433
Satd. Flow (perm)	240	3539	1583	125	3529	0	356	1863	1583	807	3539
Right Turn on Red	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Satd. Flow (RTOR)	99		99		1		26		26		334
Link Speed (mph)	45		45		45		40		40		35
Link Distance (ft)	973		2219		354		547		69		354
Travel Time (s)	14.7		33.6		6.9		9.3		9.3		6.9
Peak Hour Factor	0.95	0.95	0.92	0.92	0.92	0.92	0.90	0.90	0.90	0.84	0.84
Adj. Flow (vph)	95	1379	218	197	1115	22	233	378	26	25	525
Shared Lane Traffic (%)											
Lane Group Flow (vph)	95	1379	218	197	1137	0	233	378	26	25	525
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Left	Right	Left	Right
Median Width (ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset (ft)	0		0		0		0		0		0
Crosswalk Width (ft)	16		16		16		16		16		16
Two way Left Turn Lane	Yes		Yes		Yes		Yes		Yes		Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	2	9	15	9	15	9	15	9
Number of Detectors	1	2	1	2	1	2	1	2	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru
Leading Detector (ft)	20	100	20	100	20	100	20	100	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size (ft)	20	6	20	20	6	20	6	20	20	6	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position (ft)	94		94		94		94		94		94
Detector 2 Size (ft)	6		6		6		6		6		6
Detector 2 Type	CI+EX		CI+EX		CI+EX		CI+EX		CI+EX		CI+EX
Detector 2 Channel											
Detector 2 Extend (s)	0.0		0.0		0.0		0.0		0.0		0.0
Turn Type	pm+pt	Perm	pm+pt		pm+pt		Perm	pm+pt	Perm	pm+pt	Perm
Protected Phases	1	6	5	2	7	4	3	8			8
Permitted Phases	6	6	6	2	4	4	4	8	8		8
Detector Phase	1	6	6	5	2	7	4	4	3	8	8

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
8: Sheridan Drive & North Forest Road

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.3	27.9	27.9	8.3	27.9	8.3	27.9	21.0	27.2	27.2	8.3
Total Split (s)	30.0	60.0	60.0	20.0	50.0	0.0	25.0	40.0	40.0	20.0	35.0
Total Split (%)	21.4%	42.9%	42.9%	14.3%	35.7%	0.0%	17.9%	28.6%	28.6%	14.3%	25.0%
Maximum Green (s)	25.7	54.9	54.9	15.7	44.9		20.7	34.9	34.9	15.7	29.9
Yellow Time (s)	3.2	3.9	3.9	3.2	3.9		3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.1	1.2	1.1	1.2	1.1		1.1	1.9	1.1	1.1	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.3	5.1	5.1	4.3	5.1		4.3	5.1	5.1	4.3	5.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	None	Max	None		None	None	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0	15.0	15.0	15.0		15.0	15.0	15.0	15.0	15.0
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0	0	0	0
Act Effct Green (s)	65.1	55.2	55.2	73.9	60.1		49.0	41.5	41.5	33.1	25.6
Actuated G/C Ratio	0.49	0.42	0.42	0.56	0.46		0.37	0.31	0.31	0.25	0.19
v/c Ratio	0.42	0.93	0.30	0.81	0.71		0.65	0.05	0.10	0.77	0.59
Control Delay	21.2	49.8	16.1	57.0	33.3		42.3	46.0	12.0	28.0	58.7
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	21.2	49.8	16.1	57.0	33.3		42.3	46.0	12.0	28.0	58.7
LOS	C	D	B	E	C		D	D	B	C	E
Approach Delay	43.8			36.8			43.3				39.1
Approach LOS	D			D			D				D
Intersection Summary	Other										
Area Type:	Other										
Cycle Length:	140										
Actuated Cycle Length:	132										
Natural Cycle:	105										
Control Type:	Actuated-Uncoordinated										
Maximum v/c Ratio:	0.93										
Intersection Signal Delay:	40.7										
Intersection Capacity Utilization:	85.7%										
Analysis Period (min):	15										



Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
9: Proposed Access Road & North Forest Road

4/24/2014



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			4		
Volume (vph)	4	14	1	442	731	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.990					
Satd. Flow (prot)	1647	0	0	1863	1863	0
Flt Permitted	0.990					
Satd. Flow (perm)	1647	0	0	1863	1863	0
Link Speed (mph)	30			35	35	
Link Distance (ft)	280			310	143	
Travel Time (s)	6.4			6.0	2.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	15	1	480	795	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	19	0	0	481	796	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	Free	Free	9
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	48.5%					
Analysis Period (min)	15					
ICU Level of Service A						

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
9: Proposed Access Road & North Forest Road

4/24/2014



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			4		
Volume (veh/h)	4	14	1	442	731	1
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	15	1	480	795	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)				664		
pX, platoon unblocked	0.82					
vC, conflicting volume	1278	795	796			
vC1, stage 1 cont vol						
vC2, stage 2 cont vol						
vCu, unblocked vol	1230	795	796			
IC, single (s)	6.4	6.2	4.1			
IC, 2 stage (s)						
IF (s)	3.5	3.3	2.2			
p0 queue free %	97	96	100			
cM capacity (veh/h)	161	387	826			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	20	482	796			
Volume Left	4	1	0			
Volume Right	15	0	1			
cSH	295	826	1700			
Volume to Capacity	0.07	0.00	0.47			
Queue Length 95th (ft)	5	0	0			
Control Delay (s)	18.0	0.0	0.0			
Lane LOS	C	A				
Approach Delay (s)	18.0	0.0	0.0			
Approach LOS	C					
Intersection Summary						
Average Delay	0.3					
Intersection Capacity Utilization	48.5%					
ICU Level of Service	A					
Analysis Period (min)	15					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
10: Sheridan Drive & Proposed Access Driveway

4/24/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	10	1577	6	4	1504	14	16	0	9	20	0
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vpph)	350	0	75	0	0	0	0	0	0	0	0
Storage Length (ft)	1	0	1	0	0	0	0	0	0	0	0
Storage Lanes	25	25	25	25	25	25	25	25	25	25	25
Taper Length (ft)	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.999	0.999	0.999	0.999	0.999	0.999	0.951	0.919	0.919	0.919	0.919
Flt Protected	0.950	0.950	0.950	0.950	0.950	0.950	0.969	0.980	0.980	0.980	0.980
Satd. Flow (prot)	1770	3536	0	1770	3536	0	1770	0	1770	0	1678
Flt Permitted	0.950	0.950	0.950	0.950	0.950	0.950	0.969	0.980	0.980	0.980	0.980
Satd. Flow (perm)	1770	3536	0	1770	3536	0	1770	0	1770	0	1678
Link Speed (mph)	45	45	45	45	45	45	30	30	30	30	30
Link Distance (ft)	635	635	635	635	635	635	278	235	235	235	235
Travel Time (s)	9.6	10.5	10.5	10.5	10.5	10.5	6.3	5.3	5.3	5.3	5.3
Adj. Flow (vph)	11	1792	7	4	1671	16	23	0	13	22	0
Shared Lane Traffic (%)	0.88	0.88	0.88	0.90	0.90	0.90	0.69	0.69	0.69	0.92	0.92
Lane Group Flow (vph)	11	1799	0	4	1687	0	0	36	0	0	55
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Right
Median Width (ft)	12	12	12	12	12	12	0	0	0	0	0
Link Offset (ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width (ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9	15	15	9	15	9
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	53.8%
Analysis Period (min)	15

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
10: Sheridan Drive & Proposed Access Driveway

4/24/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	10	1577	6	4	1504	14	16	0	9	20	0
Volume (veh/h)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop
Grade	0.88	0.88	0.88	0.90	0.90	0.90	0.69	0.69	0.69	0.92	0.92
Peak Hour Factor	11	1792	7	4	1671	16	23	0	13	22	0
Hourly flow rate (vph)	11	1792	7	4	1671	16	23	0	13	22	0
Pedestrians											
Lane Width (ft)											
Walking Speed (ft/s)											
Percent Blockage											
Right turn flare (veh)											
Median type	TWLT	TWLT	TWLT	TWLT	TWLT	TWLT	TWLT	TWLT	TWLT	TWLT	TWLT
Median storage (veh)	2	2	2	2	2	2	2	2	2	2	2
Upstream signal (ft)	635	635	635	635	635	635	278	235	235	235	235
pX, platoon unblocked	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
vC, conflicting volume	1687	1799	1799	1799	1799	1799	2695	3514	899	2620	3509
vC1, stage 1 cont vol	1818	1818	1818	1818	1818	1818	1818	1818	1688	1688	1688
vC2, stage 2 cont vol	877	1696	1696	1696	1696	1696	877	1696	932	1822	1822
vCu, unblocked vol	1687	1374	1374	1374	1374	1374	2587	3695	157	2485	3690
IC, single (s)	4.1	4.1	4.1	4.1	4.1	4.1	7.5	6.5	6.9	7.5	6.5
IC, 2 stage (s)	6.5	5.5	5.5	5.5	5.5	5.5	6.5	5.5	6.5	5.5	5.5
IF (s)	2.2	2.2	2.2	2.2	2.2	2.2	3.5	4.0	3.3	3.5	4.0
p0 queue free %	97	99	99	99	99	99	75	100	98	76	100
cM capacity (veh/h)	375	366	366	366	366	366	94	92	636	92	307

Direction, Lane #							
EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
11	1195	604	4	1114	573	36	54
Volume Total	11	0	4	0	23	22	22
Volume Left	0	0	7	0	16	13	33
cSH	375	1700	1700	366	1700	136	159
Volume to Capacity	0.03	0.70	0.36	0.01	0.66	0.34	0.34
Queue Length 95th (ft)	2	0	0	1	0	25	35
Control Delay (s)	14.9	0.0	0.0	15.0	0.0	41.0	39.0
Lane LOS	B	B	B	B	B	E	E
Approach Delay (s)	0.1	0.0	0.0	41.0	39.0	E	E
Approach LOS	E	E	E	E	E	E	E

Intersection Summary	
Average Delay	1.1
Intersection Capacity Utilization	53.8%
Analysis Period (min)	15
ICU Level of Service	A

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
11: Sheridan Drive & Frankhauser Road

4/24/2014

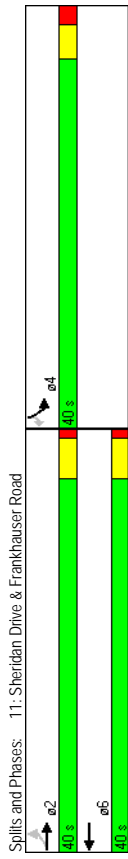
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (vph)	40	1543	1526	24	50	69
Ideal Flow (vppf)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105	0	0	0	0	50
Storage Lanes	1	0	0	0	1	1
Taper Length (ft)	65	25	25	25	25	25
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Flt Protected	0.950	0.998			0.850	
Satd. Flow (prot)	1770	3539	3532	0	1770	1583
Flt Permitted	0.119				0.950	
Satd. Flow (perm)	222	3539	3532	0	1770	1583
Right Turn on Red		Yes			Yes	
Satd. Flow (RTOR)		2			7	
Link Speed (mph)	45	45	45	30	30	30
Link Distance (ft)	101.4	635	825	18.8	18.8	18.8
Travel Time (s)	15.4	9.6	18.8			
Peak Hour Factor	0.89	0.89	0.94	0.94	0.73	0.73
Adj. Flow (vph)	45	1734	1623	26	68	95
Shared Lane Traffic (%)						
Lane Group Flow (vph)	45	1734	1649	0	68	95
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Right
Median Width(ft)	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	2	2	9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Left	Right	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94	94	94	6	6	6
Detector 2 Size(ft)	6	6	6	6	6	6
Detector 2 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 2 Channel						
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm				Perm	
Protected Phases	2	2	6	4	4	4
Permitted Phases	2	2	6	4	4	4

Lanes, Volumes, Timings
SRF & Associates
Alternative 2
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
11: Sheridan Drive & Frankhauser Road

4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	1.0	1.0
Minimum Split (s)	40.0	40.0	40.0	40.0	31.1	31.1
Total Split (s)	40.0	40.0	40.0	40.0	40.0	40.0
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Maximum Green (s)	35.2	35.2	35.2	34.9	34.9	34.9
Yellow Time (s)	3.9	3.9	3.9	3.2	3.2	3.2
All-Red Time (s)	0.9	0.9	0.9	1.9	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.8	4.8	4.8	4.0	5.1	5.1
LeadLag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0	15.0	15.0	19.0	19.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effct Green (s)	63.3	63.3	63.3	9.9	9.9	9.9
Actuated g/C Ratio	0.79	0.79	0.79	0.12	0.12	0.12
v/c Ratio	0.26	0.62	0.59	0.31	0.47	0.47
Control Delay	8.4	6.1	5.8	34.4	37.0	37.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.4	6.1	5.8	34.4	37.0	37.0
LOS	A	A	A	C	C	D
Approach Delay	6.2	5.8	5.8	35.9		
Approach LOS	A	A	A	D		
Intersection Summary						
Area Type:	Other					
Cycle Length:	80					
Actuated Cycle Length:	80					
Offset:	76 (95%), Referenced to phase 2:EBTL and 6:WBT, Start of Green					
Natural Cycle:	75					
Control Type:	Actuated-Coordinated					
Maximum v/c Ratio:	0.62					
Intersection Signal Delay:	7.3					
Intersection Capacity Utilization:	55.5%					
Analysis Period (min):	15					



Lanes, Volumes, Timings
SRF & Associates
Alternative 2
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
12: Sheridan Drive & I-290 NB

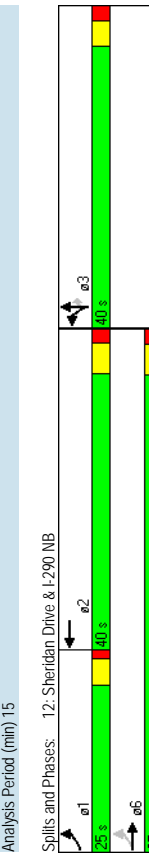
4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	249	1394	0	0	1042	510	269	0	224	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	0	0	230	0	0	0	120	0	0
Storage Lanes	1	0	0	0	1	0	0	0	1	0	0
Taper Length (ft)	105	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	0.95	0.91	0.95	1.00	1.00
Flt Protected	0.950				0.951			0.937	0.850		
Satd. Flow (prot)	1770	5085	0	0	4836	0	1681	1544	1504	0	0
Flt Permitted	0.090				0.950	0.972					
Satd. Flow (perm)	168	5085	0	0	4836	0	1681	1544	1504	0	0
Right Turn on Red			Yes			Yes			Yes		Yes
Satd. Flow (RTOR)		45			125				31		30
Link Speed (mph)		197			45				30		423
Link Distance (ft)		3.0			2.9				18.9		9.6
Travel Time (s)		0.94			0.94				0.88		0.92
Peak Hour Factor	2.65	1.483	0	0	1.109	0.543	0.306	0	0.255	0	0
Adj. Flow (vph)	265	1483	0	0	1652	0	196	189	176	0	0
Lane Group Flow (vph)	No	No	No	No	No	No	No	No	No	No	No
Enter Blocked Intersection	Left	Left	Right	Left	Right	Left	Left	Left	Right	Left	Right
Lane Alignment	12	12	12	12	12	12	12	12	12	12	12
Median Width(ft)	0	0	0	0	0	0	0	0	0	0	0
Link Offset(ft)	16	16	16	16	16	16	16	16	16	16	16
Crosswalk Width(ft)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Headway Factor	15	2	9	15	2	9	15	2	9	15	2
Turning Speed (mph)	1	2	9	15	2	9	15	2	9	15	2
Number of Detectors	Left	Thru	Thru	Left	Thru	Right	Left	Thru	Right	Left	Right
Detector Template	20	100	100	20	100	20	100	20	100	20	100
Leading Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	20	6	6	20	6	6	20	6	6	20	6
Detector 1 Size(ft)	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 1 Type	Detector 1 Channel	Detector 1 Extend (s)	Detector 1 Queue (s)	Detector 1 Delay (s)	Detector 2 Position(ft)	Detector 2 Size(ft)	Detector 2 Type	Detector 2 Channel	Detector 2 Extend (s)	Turn Type	Protected Phases
Detector 1 Channel	0.0	0.0	0.0	0.0	94	6	Ch+Ex	Ch+Ex	0.0	pm+pt	1
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	6	6	Ch+Ex	Ch+Ex	0.0	3	3
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	6	6	Ch+Ex	Ch+Ex	0.0	3	3
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	94	94	Ch+Ex	Ch+Ex	0.0	3	3
Detector 2 Position(ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Size(ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Type	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Channel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	1	6	2	3	3	3	3	3	3	3	3
Protected Phases	6	6	2	3	3	3	3	3	3	3	3
Permitted Phases	1	6	2	3	3	3	3	3	3	3	3
Detector Phase											

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
12: Sheridan Drive & I-290 NB

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Minimum Initial (s)	1.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	6.2	33.9	27.8	27.8	27.8	27.8	29.0	29.0	29.0	29.0	29.0
Total Split (s)	25.0	65.0	0.0	0.0	40.0	0.0	40.0	40.0	40.0	0.0	0.0
Total Split (%)	23.8%	61.9%	0.0%	0.0%	38.1%	0.0%	38.1%	38.1%	38.1%	0.0%	0.0%
Maximum Green (s)	20.7	59.1	34.2	34.8	34.8	34.8	34.8	34.8	34.8	34.8	34.8
Yellow Time (s)	3.2	3.9	3.9	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.1	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.3	5.9	4.0	5.8	4.0	5.2	5.2	5.2	5.2	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lag
Vehicle Extension (s)	2.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	C-Max	None	None	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	21.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0	0	0	0
Act Effct Green (s)	78.2	76.6	58.9	58.9	58.9	58.9	17.3	17.3	17.3	17.3	17.3
Actuated g/C Ratio	0.74	0.73	0.56	0.56	0.56	0.56	0.16	0.16	0.16	0.16	0.16
v/c Ratio	0.80	0.40	0.60	0.60	0.60	0.60	0.71	0.68	0.64	0.64	0.64
Control Delay	37.0	6.3	17.0	17.0	17.0	17.0	54.8	45.6	43.6	43.6	43.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.0	6.3	17.0	17.0	17.0	17.0	54.8	45.6	43.6	43.6	43.6
LOS	D	A	B	B	B	B	D	D	D	D	D
Approach Delay	11.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
Approach LOS	B	B	B	B	B	B	B	B	B	B	B



Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
13: Sheridan Drive & Harlem Road

4/24/2014

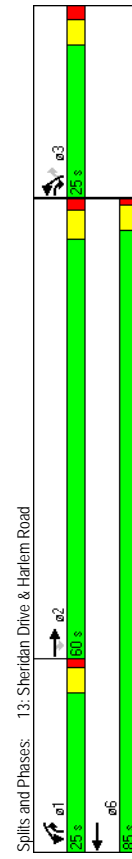
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔↔	↔↔	↔↔	↔↔	↔↔
Volume (vph)	829	315	483	827	285	814
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	215	0	140	0	0
Storage Lanes	1	1	1	2	2	2
Taper Length (ft)	230	100	100	100	25	25
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	0.88
Flt Protected		0.850				0.850
Satd. Flow (prot)	3539	1583	3433	3539	3433	2787
Flt Permitted		0.950				0.950
Satd. Flow (perm)	3539	1583	3433	3539	3433	2787
Right Turn on Red	No					Yes
Satd. Flow (RTOR)						140
Link Speed (mph)	45		45		35	
Link Distance (ft)	314		413		338	
Travel Time (s)	4.8		6.3		6.6	
Peak Hour Factor	0.85	0.85	0.92	0.92	0.90	0.90
Adj. Flow (vph)	975	371	525	899	317	904
Shared Lane Traffic (%)						
Lane Group Flow (vph)	975	371	525	899	317	904
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Right	Right
Median Width (ft)	12	24	24	24	24	24
Link Offset (ft)	0	0	0	0	0	0
Crosswalk Width (ft)	16		16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15	15	15	15	9
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (ft)	100	20	20	100	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position (ft)	0	0	0	0	0	0
Detector 1 Size (ft)	6	20	20	6	20	20
Detector 1 Type	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position (ft)	94			94		
Detector 2 Size (ft)	6			6		
Detector 2 Type	Ch+Ex			Ch+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type		pm+ov	Prot			pm+ov
Protected Phases	2	3	1	6	3	1
Permitted Phases	2	3	1	6	3	1
Detector Phase	2	3	1	6	3	1

Lanes, Volumes, Timings
SRF & Associates
Alternative 2
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
13: Sheridan Drive & Harlem Road

4/24/2014

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Switch Phase	→	↔	↔	↔	↔	↔
Minimum Initial (s)	1.0	1.0	1.0	4.0	1.0	1.0
Minimum Split (s)	30.5	6.2	5.3	32.3	6.2	5.3
Total Split (s)	60.0	25.0	25.0	85.0	25.0	25.0
Total Split (%)	54.5%	22.7%	22.7%	77.3%	22.7%	22.7%
Maximum Green (s)	54.5	19.8	20.7	80.7	19.8	20.7
Yellow Time (s)	3.9	3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.6	2.0	1.1	1.1	2.0	1.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.2	4.3	4.3	5.2	4.3
Lead/Lag	Lag	Lead	Lead	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	C-Max	None	None	None	None	None
Walk Time (s)	7.0		7.0			
Flash Dont Walk (s)	18.0		21.0			
Pedestrian Calls (#/hr)	0		0			
Act Effct Green (s)	59.4	79.4	21.1	86.0	14.5	40.8
Actuated g/C Ratio	0.54	0.72	0.19	0.78	0.13	0.37
v/c Ratio	0.51	0.32	0.80	0.32	0.70	0.81
Control Delay	18.0	6.7	52.2	4.1	54.1	31.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.0	6.7	52.2	4.1	54.1	31.8
LOS	B	A	D	A	D	C
Approach Delay	14.9			21.8		37.6
Approach LOS	B			C		D



Lanes, Volumes, Timings
SRF & Associates
Alternative 2
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
14: I-290 SB & Harlem Road

4/24/2014

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (vph)	298	688	450	21	390	376
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	0	0	330	0
Storage Lanes	1	1	0	0	1	0
Taper Length (ft)	25	25	25	25	75	25
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	3514	0	1770	3539
Flt Permitted	0.950				0.259	
Satd. Flow (perm)	1770	1583	3514	0	482	3539
Right Turn on Red	Yes	Yes	Yes	Yes	Yes	Yes
Satd. Flow (RTOR)	165	4				
Link Speed (mph)	30	35	35	35	35	35
Link Distance (ft)	333	250	456	456	456	456
Travel Time (s)	7.6	4.9	8.9	8.9	8.9	8.9
Peak Hour Factor	0.81	0.81	0.87	0.87	0.88	0.88
Adj. Flow (vph)	368	849	541	24	443	427
Shared Lane Traffic (%)						
Lane Group Flow (vph)	368	849	541	0	443	427
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	9	9	15	15
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Left	Thru	Thru
Leading Detector (ft)	20	20	100	20	100	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	6	6
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	0.0	0.0	94	94	94	94
Detector 2 Size(ft)	6	6	6	6	6	6
Detector 2 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 2 Channel						
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type		pm+ov			pm+pl	
Protected Phases	3	1	2	1	1	6
Permitted Phases	3	1	2	1	1	6

Lanes, Volumes, Timings
SRF & Associates
Alternative 2
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
14: I-290 SB & Harlem Road

4/24/2014

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	9.2	30.6	9.2	21.0	21.0
Total Split (s)	40.0	35.0	50.0	0.0	35.0	85.0
Total Split (%)	32.0%	28.0%	40.0%	0.0%	28.0%	68.0%
Maximum Green (s)	35.2	30.7	45.0	30.7	80.0	80.0
Yellow Time (s)	3.2	3.2	3.6	3.2	3.6	3.6
All-Red Time (s)	1.6	1.1	1.4	1.1	1.4	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.8	4.3	5.0	4.0	4.3	5.0
Lead/Lag	Lead	Lead	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Min	None	None	None
Walk Time (s)			10.0			
Flash Dont Walk (s)			15.0			
Pedestrian Calls (#/hr)			0			
Act Effct Green (s)	22.8	49.2	19.5	46.2	45.4	45.4
Actuated g/C Ratio	0.29	0.63	0.25	0.59	0.58	0.58
v/c Ratio	0.72	0.81	0.62	0.70	0.21	0.21
Control Delay	35.6	16.3	31.3	18.0	8.8	8.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.6	16.3	31.3	18.0	8.8	8.8
LOS	D	B	C	B	A	A
Approach Delay	22.1	31.3	31.3	13.5	13.5	13.5
Approach LOS	C	C	C	B	B	B

Intersection Summary

Area Type: Other

Cycle Length: 125

Actuated Cycle Length: 78.7

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.81

Intersection Signal Delay: 21.2

Intersection Capacity Utilization: 63.5%

Analysis Period (min): 15

ICU Level of Service B



Lanes, Volumes, Timings
SRF & Associates
Alternative 2
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
15: Maple Road & Proposed North Driveway
4/24/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔	↔↔	↔↔	↔	↔
Volume (vph)	977	11	14	1007	28	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	2.25	0	0	0	150
Storage Lanes	0	1	1	1	1	1
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Fit	0.998		0.950		0.950	0.850
Flt Protected		0	1770	3539	1770	1583
Satd. Flow (prot)	3532	0	1770	3539	1770	1583
Flt Permitted		0.950		0.950		0.950
Satd. Flow (perm)	3532	0	1770	3539	1770	1583
Link Speed (mph)	45		45	30		30
Link Distance (ft)	1002		926	372		372
Travel Time (s)	15.2		14.0	8.5		8.5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1062	12	15	1095	30	46
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1074	0	15	1095	30	46
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12		12	12		12
Link Offset(ft)	0		0	0		0
Crosswalk Width(ft)	16		16	16		16
Two way Left Turn Lane	Yes		Yes			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15	15	15	15	9
Sign Control	Free		Free	Stop		Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	37.8%					
Analysis Period (min)	15					
	ICU Level of Service: A					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
15: Maple Road & Proposed North Driveway
4/24/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔	↔↔	↔↔	↔	↔
Volume (veh/h)	977	11	14	1007	28	42
Sign Control	Free		Free	Stop		Stop
Grade	0%		0%	0%		0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1062	12	15	1095	30	46
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						6
Median type			TW/TL			
Median storage (veh)	2			2		
Upstream signal (ft)						
pX, platoon unblocked			1074		1646	537
vC, conflicting volume					1068	
vC1, stage 1 conf vol					578	
vC2, stage 2 conf vol			1074		1646	537
vCu, unblocked vol			4.1		6.8	6.9
IC, 2 stage (s)					5.8	
IF (s)			2.2		3.5	3.3
p0 queue free %			98		88	91
cM capacity (veh/h)			645		258	488
Direction, Lane #						
	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	708	366	15	547	547	76
Volume Left	0	0	15	0	0	30
Volume Right	0	12	0	0	0	46
cSH	1700	1700	645	1700	1700	645
Volume to Capacity	0.42	0.22	0.02	0.32	0.32	0.12
Queue Length 95th (ft)	0	0	2	0	0	10
Control Delay (s)	0.0	0.0	10.7	0.0	0.0	16.2
Lane LOS			B			C
Approach Delay (s)	0.0		0.1			16.2
Approach LOS						C
Intersection Summary						
Average Delay	0.6					
Intersection Capacity Utilization	37.8%					
Analysis Period (min)	15					
	ICU Level of Service: A					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
17: Proposed Access Road & Frankhauser Road

4/24/2014

	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W					R
Volume (vph)	53	4	50	14	0	67
Ideal Flow (vpph)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Flt	0.991		0.971			
Flt Protected	0.955					
Satd. Flow (prot)	1763	0	1809	0	0	1863
Flt Permitted	0.955					
Satd. Flow (perm)	1763	0	1809	0	0	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	200		825			244
Travel Time (s)	4.5		18.8			5.5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	58	4	54	15	0	73
Shared Lane Traffic (%)						
Lane Group Flow (vph)	62	0	69	0	0	73
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	15
Sign Control	Stop	Free	Free	Free	Free	Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	13.5%					
Analysis Period (min)	15					
ICU Level of Service	A					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
17: Proposed Access Road & Frankhauser Road

4/24/2014

	WBL	WBR	NBT	NBR	SBL	SBT
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W					R
Volume (veh/h)	53	4	50	14	0	67
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	58	4	54	15	0	73
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)			825			
pX, platoon unblocked						
vC, conflicting volume	135	62			70	
vC1, stage 1 cont vol						
vC2, stage 2 cont vol	135	62			70	
vCu, unblocked vol	6.4	6.2			4.1	
IC, single (s)						
IC, 2 stage (s)						
IF (s)	3.5	3.3			2.2	
p0 queue free %	93	100			100	
cM capacity (veh/h)	859	1003			1531	
Direction, Lane #						
	WB 1	NB 1	SB 1			
Volume Total	62	70	73			
Volume Left	58	0	0			
Volume Right	4	15	0			
cSH	868	1700	1531			
Volume to Capacity	0.07	0.04	0.00			
Queue Length 95th (ft)	6	0	0			
Control Delay (s)	9.5	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	9.5	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay	2.9					
Intersection Capacity Utilization	13.5%					
ICU Level of Service	A					
Analysis Period (min)	15					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
52: Sheridan Drive & Proposed Access Driveway

4/24/2014



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	1	1	1	1	2	4
Volume (vph)	1605	1518	1900	1900	1900	1900
Ideal Flow (vphpl)	75	0	0	0	0	0
Storage Length (ft)	1	0	1	0	1	0
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Flt Protected	0.950				0.984	
Satd. Flow (prot)	1770	3539	3539	0	1668	0
Flt Permitted	0.950				0.984	
Satd. Flow (perm)	1770	3539	3539	0	1668	0
Link Speed (mph)	45	45	30		30	
Link Distance (ft)	695	973	432		432	
Travel Time (s)	10.5	14.7	9.8		9.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	1745	1650	1	2	4
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1	1745	1651	0	6	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Right
Median Width (ft)	12	12	12	12	12	12
Link Offset (ft)	0	0	0	0	0	0
Crosswalk Width (ft)	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9
Sign Control	Free	Free	Free	Free	Stop	Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	54.4%					
Analysis Period (min)	15					
	ICU Level of Service: A					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
52: Sheridan Drive & Proposed Access Driveway

4/24/2014



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	1	1	1	1	2	4
Volume (veh/h)	1605	1518	1900	1900	1900	1900
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	1745	1650	1	2	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL TWLTL					
Median storage (veh)	2 2					
Upstream signal (ft)	973					
pX, platoon unblocked	0.74				0.74	0.74
vC, conflicting volume	1651				2525	826
vC1, stage 1 conf vol					1651	
vC2, stage 2 conf vol					874	
vCu, unblocked vol	1170				2356	50
IC, single (s)	4.1				6.8	6.9
IC, 2 stage (s)					5.8	
IF (s)	2.2				3.5	3.3
p0 queue free %	100				99	99
cM capacity (veh/h)	437				163	742
Direction, Lane #						
Volume Total	1	872	872	1100	551	7
Volume Left	1	0	0	0	0	2
Volume Right	0	0	0	0	1	4
cSH	437	1700	1700	1700	1700	340
Volume to Capacity	0.00	0.51	0.51	0.65	0.32	0.02
Queue Length 95th (ft)	0	0	0	0	0	1
Control Delay (s)	13.3	0.0	0.0	0.0	0.0	15.8
Lane LOS	B				C	C
Approach Delay (s)	0.0			0.0		15.8
Approach LOS				C		C
Intersection Summary						
Average Delay	0.0					
Intersection Capacity Utilization	54.4%					
Analysis Period (min)	15					
	ICU Level of Service: A					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
 1: Maple Road & Millersport Hwy SB
 4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (vph)	29	964	858	230	57	174
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150			150	0	0
Storage Lanes	1			1	1	1
Taper Length (ft)	35			100	25	25
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Flt Protected	0.950			0.850	0.950	
Satd. Flow (prot)	1770	3539	3539	1583	1770	1583
Flt Permitted	0.288			0.950		
Satd. Flow (perm)	536	3539	3539	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)		45	45		30	91
Link Speed (mph)		555	654		281	
Link Distance (ft)		8.4	9.9		6.4	
Travel Time (s)		0.90	0.92	0.92	0.81	0.81
Peak Hour Factor		32	1071	933	250	70
Adj. Flow (vph)		32	1071	933	250	70
Shared Lane Traffic (%)						
Lane Group Flow (vph)		32	1071	933	250	70
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Right
Median Width(ft)		12	12	12	12	
Link Offset(ft)		0	0	0	0	
Crosswalk Width(ft)		16	16	16	16	
Two way Left Turn Lane		Yes				
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94	94	94			
Detector 2 Size(ft)	6	6	6			
Detector 2 Type	CI+EX	CI+EX	CI+EX			
Detector 2 Channel						
Detector 2 Extend (s)	0.0	0.0	0.0			
Turn Type	Perm			pm+ov		Perm
Protected Phases		2	6	4	4	
Permitted Phases	2			6	4	4
Detector Phase	2			6	4	4

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
 1: Maple Road & Millersport Hwy SB
 4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	1.0	1.0	1.0
Minimum Split (s)	9.1	9.1	9.1	6.2	6.2	6.2
Total Split (s)	40.0	40.0	40.0	30.0	30.0	30.0
Total Split (%)	57.1%	57.1%	57.1%	42.9%	42.9%	42.9%
Maximum Green (s)	34.9	34.9	34.9	25.4	25.4	25.4
Yellow Time (s)	3.9	3.9	3.9	3.2	3.2	3.2
All-Red Time (s)	1.2	1.2	1.2	1.4	1.4	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	4.6	4.6	4.6
LeadLag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Min	C-Min	C-Min	None	None	None
Act Effct Green (s)	48.8	48.8	48.8	7.0	11.5	11.5
Actuated g/C Ratio	0.70	0.70	0.70	1.00	0.16	0.16
v/c Ratio	0.09	0.43	0.38	0.16	0.24	0.64
Control Delay	5.6	6.0	7.5	0.2	25.4	23.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.6	6.0	7.5	0.2	25.4	23.8
LOS	A	A	A	A	C	C
Approach Delay		6.0	6.0			
Approach LOS		A	A		C	C

Intersection Summary

Area Type:	Other
Cycle Length:	70
Actuated Cycle Length:	70
Offset:	5 (7%), Referenced to phase 2:EBTL and 6:WBT. Start of Green
Natural Cycle:	40
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.64
Intersection Signal Delay:	8.0
Intersection Capacity Utilization:	42.6%
Analysis Period (min):	15

Splits and Phases: 1: Maple Road & Millersport Hwy SB



Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
 2: Maple Road & Millersport Hwy NB

4/24/2014

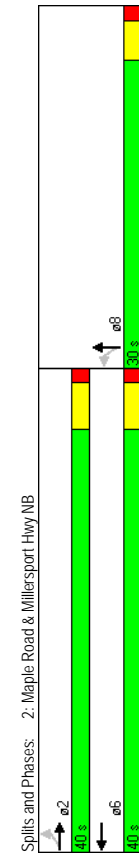
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	97	924	0	0	995	25	91	0	465	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	0	0	0	0	0	0	0	0	0
Storage Lanes	1	0	0	0	0	1	0	0	0	0	0
Taper Length (ft)	50	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.950				0.996		0.950		0.850		
Satd. Flow (prot)	1770	3539	0	0	3525	0	1770	1583	0	0	0
Flt Permitted	0.155				0.950		0.950				
Right Turn on Red	289	3539	0	0	3525	0	1770	1583	0	0	0
Satd. Flow (RTOR)			Yes		Yes		Yes	Yes			Yes
Link Speed (mph)	45			5			72				30
Link Distance (ft)	654			1770			319				263
Travel Time (s)	9.9			26.8			7.3				6.0
Peak Hour Factor	0.91	0.91	0.87	0.87	0.87	0.84	0.84	0.84	0.84	0.92	0.92
Adj. Flow (vph)	107	1015	0	0	1144	29	108	0	554	0	0
Shared Lane Traffic (%)											
Lane Group Flow (vph)	107	1015	0	0	1173	0	108	554	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9	15	9	15	9	15
Number of Detectors	1	2	2	2	2	2	1	2	2	2	2
Detector Template	Left	Thru	Thru	Left	Thru	Thru	Left	Thru	Left	Thru	Thru
Leading Detector (ft)	20	100	100	100	100	20	100	100	100	100	100
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	6	6	20	6	6	6	6	6
Detector 1 Type	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94			94		94		
Detector 2 Size(ft)	6			6			6		6		
Detector 2 Type	Ch+Ex			Ch+Ex			Ch+Ex		Ch+Ex		
Detector 2 Channel											
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm			Perm			Perm		Perm		
Protected Phases	2			6			8		8		
Permitted Phases	2			6			8		8		
Detector Phase	2			6			8		8		

Lanes, Volumes, Timings
 SRF & Associates
 Alternative 2
 Page 3

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
 2: Maple Road & Millersport Hwy NB

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	1.0	1.0	1.0	4.0	4.0	4.0	1.0	1.0	1.0	1.0	1.0
Minimum Split (s)	6.1	6.1	6.1	9.1	9.1	9.1	6.2	6.2	6.2	6.2	6.2
Total Split (s)	40.0	40.0	40.0	0.0	0.0	0.0	30.0	30.0	30.0	0.0	0.0
Total Split (%)	57.1%	57.1%	57.1%	0.0%	0.0%	0.0%	42.9%	42.9%	42.9%	0.0%	0.0%
Maximum Green (s)	34.9	34.9	34.9	34.9	34.9	34.9	25.4	25.4	25.4	25.4	25.4
Yellow Time (s)	3.9	3.9	3.9	3.9	3.9	3.9	3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.2	1.2	1.2	1.2	1.2	1.2	1.4	1.4	1.4	1.4	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time (s)	5.1	5.1	5.1	4.0	4.0	4.0	4.6	4.6	4.6	4.0	4.0
Total Lost Time (s)	5.1	5.1	5.1	4.0	4.0	4.0	4.6	4.6	4.6	4.0	4.0
Lead-Lag											
Lead-Lag Optimize?											
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
Recall Mode	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	35.8	35.8	35.8	35.8	35.8	35.8	24.5	24.5	24.5	24.5	24.5
Actuated g/C Ratio	0.51	0.51	0.51	0.51	0.51	0.51	0.35	0.35	0.35	0.35	0.35
v/c Ratio	0.72	0.56	0.56	0.65	0.65	0.65	0.17	0.17	0.17	0.17	0.17
Control Delay	43.3	11.1	11.1	14.9	14.9	14.9	16.1	16.1	16.1	42.6	42.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.3	11.1	11.1	14.9	14.9	14.9	16.1	16.1	16.1	42.6	42.6
LOS	D	B	B	B	B	B	B	B	B	D	D
Approach Delay	14.1	14.1	14.1	14.9	14.9	14.9	38.3	38.3	38.3	38.3	38.3
Approach LOS	B	B	B	B	B	B	D	D	D	D	D
Intersection Summary											
Area Type:	Other										
Cycle Length:	70										
Actuated Cycle Length:	70										
Offset:	5 (7%), Referenced to phase 2:EBTL and 6:WBT, Start of Green										
Natural Cycle:	65										
Control Type:	Actuated-Coordinated										
Maximum v/c Ratio:	0.92										
Intersection Signal Delay:	19.9										
Intersection LOS:	B										
Intersection Capacity Utilization:	74.8%										
Analysis Period (min):	15										



Splits and Phases: 2: Maple Road & Millersport Hwy NB

Lanes, Volumes, Timings
 SRF & Associates
 Alternative 2
 Page 4

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
3: Maple Road & Maplemere Road

4/24/2014

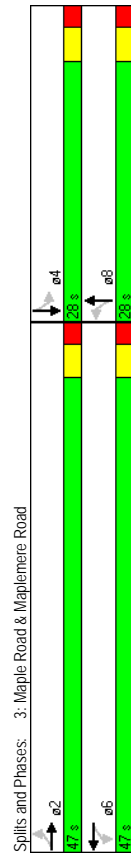
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	36	1253	35	21	908	62	25	0	12	77	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	70	0	0	0	0	0	0	0	0
Storage Lanes	1	0	1	0	0	0	0	0	0	0	0
Taper Length (ft)	50	25	50	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Flt	0.996			0.990				0.957		0.964	
Flt Permitted	0.950			0.950				0.967		0.968	
Satd. Flow (prot)	1770	3525	0	1770	3504	0	0	1724	0	0	1738
Satd. Flow (perm)	0.224			0.153				0.779		0.764	
Right Turn on Red	417	3525	0	285	3504	0	0	1389	0	0	1372
Right Turn (RTOR)	Yes			Yes				Yes		Yes	
Satd. Flow (RTOR)	6	15		15				19		25	
Link Speed (mph)	45			45				30		30	
Link Distance (ft)	1770			1106				378		402	
Travel Time (s)	26.8			16.8				8.6		9.1	
Peak Hour Factor	0.94	0.94	0.94	0.87	0.87	0.87	0.62	0.62	0.62	0.81	0.81
Adj. Flow (vph)	38	1333	37	24	1044	71	40	0	19	95	10
Shared Lane Traffic (%)											
Lane Group Flow (vph)	38	1370	0	24	1115	0	0	59	0	0	143
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	12			12				0		0	
Link Offset(ft)	0			0				0		0	
Crosswalk Width(ft)	16			16				16		16	
Two way Left Turn Lane	Yes			Yes				Yes		Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	15	9	15	15	9	15	15	9
Number of Detectors	1	2		1	2		1	2		1	2
Detector Template	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left
Leading Detector (ft)	20	100	20	100	20	100	20	100	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	6	20	6	20	6	20	6	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94			94		94		94
Detector 2 Size(ft)	6			6			6		6		6
Detector 2 Type	CI+EX			CI+EX			CI+EX		CI+EX		CI+EX
Detector 2 Channel											
Detector 2 Extend (s)	0.0			0.0			0.0		0.0		0.0
Turn Type	Perm			Perm			Perm		Perm		Perm
Protected Phases	2			6			8		8		4
Permitted Phases	2			6			8		8		4
Detector Phase	2			6			8		8		4

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
3: Maple Road & Maplemere Road

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	9.0	9.0	9.0	9.0	9.0	27.0	27.0	27.0	27.0	27.0
Total Split (s)	47.0	47.0	0.0	47.0	47.0	0.0	28.0	28.0	0.0	28.0	28.0
Total Split (%)	62.7%	62.7%	0.0%	62.7%	62.7%	0.0%	37.3%	37.3%	0.0%	37.3%	37.3%
Maximum Green (s)	42.0	42.0	42.0	42.0	42.0	42.0	23.0	23.0	0.0	23.0	23.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
LeadLag											
Lead-Lag Optimize?											
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	None	None	None	None	None
Recall Mode	Min	Min	Min	Min	Min	Min	None	None	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	15.0	15.0	15.0	15.0	15.0
Flash Dont Walk (s)							0	0	0	0	0
Pedestrian Calls (#/hr)											
Act Effct Green (s)	33.9	33.9	33.9	33.9	33.9	33.9	9.7	9.7	0	0	10.3
Actuated g/C Ratio	0.68	0.68	0.68	0.68	0.68	0.68	0.19	0.19	0.21	0.21	0.47
v/c Ratio	0.13	0.57	0.12	0.47	0.12	0.47	0.21	0.21	0.21	0.21	0.47
Control Delay	6.6	7.6	7.2	6.5	7.2	6.5	16.0	16.0	16.0	22.4	22.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.6	7.6	7.2	6.5	7.2	6.5	16.0	16.0	16.0	22.4	22.4
LOS	A	A	A	A	A	A	B	B	B	C	C
Approach Delay	7.6			6.5			16.0		16.0		22.4
Approach LOS	A			A			B		B		C
Intersection Summary	Other										
Area Type:	Other										
Cycle Length:	75										
Actuated Cycle Length:	49.9										
Natural Cycle:	60										
Control Type:	Actuated-Uncoordinated										
Maximum v/c Ratio:	0.57										
Intersection Signal Delay:	8.1										
Intersection Capacity Utilization:	51.7%										
Analysis Period (min):	15										



Spills and Phases: 3: Maple Road & Maplemere Road
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
4: Maple Road & Donna Lea Blvd

4/24/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (vph)	1313	29	23	979	12	21
Ideal Flow (vpph)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	50	0	0	0	0
Storage Lanes	0	1	0	1	0	0
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Flt	0.997		0.914		0.982	
Flt Protected		0.950		0.982		
Satd. Flow (prot)	3529	0	1770	3539	1672	0
Flt Permitted		0.950		0.982		
Satd. Flow (perm)	3529	0	1770	3539	1672	0
Link Speed (mph)	45		45	30		30
Link Distance (ft)	1106		1000	355		355
Travel Time (s)	16.8		15.2	8.1		8.1
Peak Hour Factor	0.73	0.73	0.77	0.82	0.82	0.82
Adj. Flow (vph)	1799	40	30	1271	15	26
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1839	0	30	1271	41	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12		12	12		12
Link Offset(ft)	0		0	0		0
Crosswalk Width(ft)	16		16	16		16
Two way Left Turn Lane	Yes		Yes			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		15		9
Sign Control	Free	Free	Free	Free	Stop	Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	47.2%					
Analysis Period (min)	15					
	ICU Level of Service: A					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
4: Maple Road & Donna Lea Blvd

4/24/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (veh/h)	1313	29	23	979	12	21
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%		0%	0%		0%
Peak Hour Factor	0.73	0.73	0.77	0.77	0.82	0.82
Hourly flow rate (vph)	1799	40	30	1271	15	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			TWLT			
Median storage (veh)	2			2		
Upstream signal (ft)	1106					
pX, platoon unblocked		0.76		0.76		0.76
vC, conflicting volume		1838		2514		919
vC1, stage 1 conf vol				1818		
vC2, stage 2 conf vol				695		
vCu, unblocked vol		1468		2359		255
IC, single (s)		4.1		6.8		6.9
IC, 2 stage (s)				5.8		
IF (s)		2.2		3.5		3.3
p0 queue free %		91		89		95
cM capacity (veh/h)		346		129		564
Direction, Lane #						
	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	1199	639	30	636	636	40
Volume Left	0	0	30	0	0	15
Volume Right	0	40	0	0	0	26
cSH	1700	1700	346	1700	1700	253
Volume to Capacity	0.71	0.38	0.09	0.37	0.37	0.16
Queue Length 95th (ft)	0	0	7	0	0	14
Control Delay (s)	0.0	0.0	16.4	0.0	0.0	21.9
Lane LOS			C			C
Approach Delay (s)	0.0		0.4			21.9
Approach LOS			C			C
Intersection Summary						
Average Delay	0.4					
Intersection Capacity Utilization	47.2%					
Analysis Period (min)	15					
	ICU Level of Service: A					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
5: Maple Road & Audubon Golf Club

4/24/2014



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	0	1319	14	8	1029	2	10	0	0	6	0
Volume (vph)	0	1319	14	8	1029	2	10	0	0	6	0
Ideal Flow (vpph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	50	0	0	0	0	0	0	0	0
Storage Lanes	1	0	1	0	0	0	0	0	0	0	0
Taper Length (ft)	25	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Flt Protected		0.998		0.950		0.948		0.970			
Flt Permitted	1863	3532	0	1770	3539	0	1713	0	0	1863	0
Satd. Flow (perm)	1863	3532	0	1770	3539	0	1713	0	0	1863	0
Link Speed (mph)	45	46	45	45	45	30	30	30	30	30	30
Link Distance (ft)	446	446	556	556	556	469	469	469	469	111	111
Travel Time (s)	6.8	6.8	8.4	8.4	8.4	10.7	10.7	10.7	10.7	2.5	2.5
Adj. Flow (vph)	0	1434	15	9	1106	2	16	0	10	0	0
Shared Lane Traffic (%)											
Lane Group Flow (vph)	0	1449	0	9	1108	0	0	26	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Right
Median Width (ft)	12	12	12	12	12	0	0	0	0	0	0
Link Offset (ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width (ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	15	15	15	15	15	15	15	15	15	15
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	0	956	493	9	738	371	26	0
Volume Left	0	0	0	9	0	0	16	0
Volume Right	0	0	15	0	0	2	10	0
cSH	1700	1700	1700	463	1700	1700	173	1700
Volume to Capacity	0.00	0.56	0.29	0.02	0.43	0.22	0.15	0.00
Queue Length 95th (ft)	0	0	0	1	0	0	13	0
Control Delay (s)	0.0	0.0	0.0	12.9	0.0	0.0	29.5	0.0
Lane LOS				B			D	A
Approach Delay (s)	0.0	0.1	0.1	29.5	0.0	0.0	0.0	0.0
Approach LOS				D			D	A

Intersection Summary	Value
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	46.9%
Analysis Period (min)	15

Intersection Summary	Value
Average Delay	0.3
Intersection Capacity Utilization	46.9%
ICU Level of Service	A
Analysis Period (min)	15

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
5: Maple Road & Audubon Golf Club

4/24/2014



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	0	1319	14	8	1029	2	10	0	6	0	0
Volume (veh/h)	0	1319	14	8	1029	2	10	0	6	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.93	0.93	0.93	0.61	0.61	0.61	0.92	0.92
Hourly flow rate (vph)	0	1434	15	9	1106	2	16	0	10	0	0
Pedestrians											
Lane Width (ft)											
Walking Speed (ft/s)											
Percent Blockage											
Right turn flare (veh)											
Median type											
Median storage (veh)											
Upstream signal (ft)											
pX, platoon unblocked											
vC, conflicting volume	1109		1449				2012	2567	724	1851	2574
vC1, stage 1 conf vol							1441	1441	1125	1125	1125
vC2, stage 2 conf vol							570	1126	727	727	1449
vCu, unblocked vol	1109		1449				2012	2567	724	1851	2574
IC, single (s)	4.1		4.1				7.5	6.5	6.9	7.5	6.5
IC, 2 stage (s)							6.5	5.5	6.5	6.5	5.5
IF (s)	2.2		2.2				3.5	4.0	3.3	3.5	4.0
p0 queue free %	100		98				87	100	97	100	100
cM capacity (veh/h)	626		463				131	155	368	183	150

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	0	956	493	9	738	371	26	0
Volume Left	0	0	0	9	0	0	16	0
Volume Right	0	0	15	0	0	2	10	0
cSH	1700	1700	1700	463	1700	1700	173	1700
Volume to Capacity	0.00	0.56	0.29	0.02	0.43	0.22	0.15	0.00
Queue Length 95th (ft)	0	0	0	1	0	0	13	0
Control Delay (s)	0.0	0.0	0.0	12.9	0.0	0.0	29.5	0.0
Lane LOS				B			D	A
Approach Delay (s)	0.0	0.1	0.1	29.5	0.0	0.0	0.0	0.0
Approach LOS				D			D	A

Intersection Summary	Value
Average Delay	0.3
Intersection Capacity Utilization	46.9%
ICU Level of Service	A
Analysis Period (min)	15

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
6: Maple Road & North Forest Road

4/24/2014

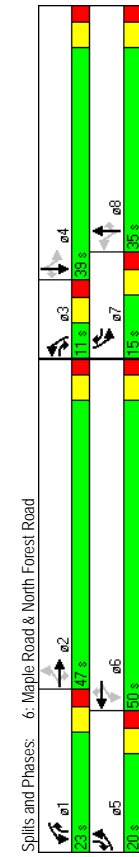
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	186	1006	143	238	773	96	92	348	203	169	386
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	415	220	315	220	315	150	125	220	250	250	250
Storage Lanes	1	1	1	1	1	1	1	1	1	1	1
Taper Length (ft)	90	115	60	25	95	25	95	25	90	90	25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.950		0.950		0.850		0.850		0.850		0.850
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1863	1583	1770	1863
Flt Permitted	0.209		0.094		0.172		0.182		0.182		0.182
Satd. Flow (perm)	389	3539	1583	175	3539	1583	320	1863	1583	339	1863
Right Turn on Red	Yes	Yes	Yes	No	No	No	No	Yes	Yes	Yes	Yes
Satd. Flow (RTOR)	138		138					28			69
Link Speed (mph)	45		45		45		35		35		35
Link Distance (ft)	1705		820		529		608		608		608
Travel Time (s)	25.8		12.4		10.3		11.8		11.8		11.8
Peak Hour Factor	0.92	0.92	0.92	0.90	0.90	0.90	0.96	0.96	0.96	0.87	0.87
Adj. Flow (vph)	202	1093	155	264	859	107	96	362	211	194	444
Shared Lane Traffic (%)											
Lane Group Flow (vph)	202	1093	155	264	859	107	96	362	211	194	444
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Median Width (ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset (ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width (ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane	Yes		Yes		Yes		Yes		Yes		Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	2	1	2	1	2	1	2	1
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru
Leading Detector (ft)	20	100	20	100	20	100	20	100	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size (ft)	20	6	20	20	6	20	20	6	20	20	6
Detector 1 Type	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position (ft)	94		94		94		94		94		94
Detector 2 Size (ft)	6		6		6		6		6		6
Detector 2 Type	Ch+Ex		Ch+Ex		Ch+Ex		Ch+Ex		Ch+Ex		Ch+Ex
Detector 2 Channel											
Detector 2 Extend (s)	0.0		0.0		0.0		0.0		0.0		0.0
Turn Type	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt
Protected Phases	5	2	3	1	6	7	3	8	1	7	4
Permitted Phases	2	2	2	6	6	6	8	8	4	4	4
Detector Phase	5	2	3	1	6	7	3	8	1	7	4

Lanes, Volumes, Timings
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Alternative 2
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
6: Maple Road & North Forest Road

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	1.0	4.0	1.0	1.0	4.0	1.0	1.0	4.0	1.0	1.0	4.0
Minimum Split (s)	7.0	35.0	7.0	7.0	35.0	7.0	7.0	35.0	7.0	7.0	35.0
Total Split (s)	20.0	47.0	11.0	23.0	50.0	15.0	11.0	35.0	23.0	15.0	39.0
Total Split (%)	16.7%	39.2%	9.2%	19.2%	41.7%	12.5%	9.2%	29.2%	19.2%	12.5%	32.5%
Maximum Green (s)	14.0	41.0	5.0	17.0	44.0	9.0	5.0	29.0	17.0	9.0	33.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Walk Time (s)	7.0		7.0		7.0		7.0		7.0		7.0
Flash Dont Walk (s)	22.0		22.0		22.0		22.0		22.0		22.0
Pedestrian Calls (#/hr)	0		0		0		0		0		0
Act Effct Green (s)	50.9	38.9	50.0	58.2	42.5	57.7	31.2	26.2	47.9	39.3	30.2
Actuated g/C Ratio	0.45	0.34	0.44	0.51	0.37	0.51	0.27	0.23	0.42	0.34	0.26
v/c Ratio	0.64	0.91	0.20	0.86	0.65	0.13	0.63	0.85	0.31	0.84	0.90
Control Delay	25.0	48.0	5.2	54.6	32.9	16.5	47.7	61.5	20.5	59.6	63.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.0	48.0	5.2	54.6	32.9	16.5	47.7	61.5	20.5	59.6	63.6
LOS	C	D	A	D	C	B	D	E	C	E	B
Approach Delay	40.2		40.2		36.1		46.6		46.6		52.9
Approach LOS	D		D		D		D		D		D
Intersection Summary	Other										
Area Type:	Other										
Cycle Length:	120										
Actuated Cycle Length:	114										
Natural Cycle:	85										
Control Type:	Actuated-Uncoordinated										
Maximum v/c Ratio:	0.91										
Intersection Signal Delay:	42.4										
Intersection Capacity Utilization:	88.7%										
Analysis Period (min):	15										



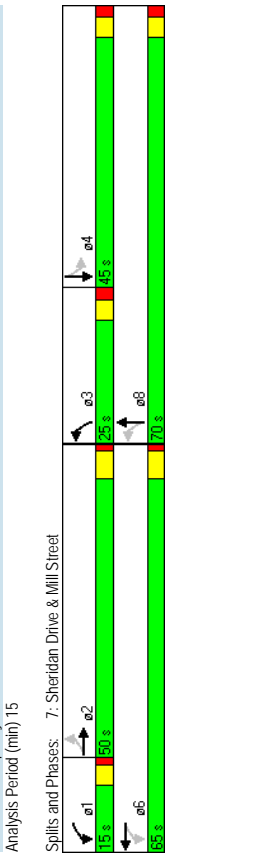
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
7: Sheridan Drive & Mill Street 4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	11	1309	21	121	1364	53	148	53	148	34	68
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vpph)	100	0	150	0	150	0	40	0	75	0	0
Storage Length (ft)	1	0	1	0	1	0	0	0	1	0	0
Storage Lanes	65	25	60	25	60	25	25	25	25	25	25
Taper Length (ft)	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.998	0.994		0.994		0.890		0.977			
Flt Protected	0.950		0.950		0.950		0.950		0.950		
Satd. Flow (prot)	1770	3532	0	1770	3518	0	1770	1658	0	1770	1820
Flt Permitted	0.089		0.081		0.600		0.608		0.608		
Satd. Flow (perm)	166	3532	0	151	3518	0	1118	1658	0	1133	1820
Right Turn on Red			No			Yes			No		Yes
Satd. Flow (RTOR)			4								7
Link Speed (mph)	45		45		45		30		30		30
Link Distance (ft)	2782		977		838		362		838		362
Travel Time (s)	42.2		14.8		19.0		8.2		19.0		8.2
Peak Hour Factor	0.84	0.84	0.84	0.92	0.92	0.83	0.83	0.83	0.83	0.77	0.77
Adj. Flow (vph)	13	1583	25	132	1483	58	178	64	178	44	88
Shared Lane Traffic (%)											
Lane Group Flow (vph)	No	No	0	No	No	0	178	242	0	44	104
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset(ft)	16		16		16		16		16		16
Crosswalk Width(ft)	Yes		Yes		Yes		Yes		Yes		Yes
Two way Left Turn Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Headway Factor	15	9	15	9	15	9	15	9	15	9	15
Turning Speed (mph)	1	2	1	2	1	2	1	2	1	2	1
Number of Detectors	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left
Detector Template	20	100	20	100	20	100	20	100	20	100	20
Leading Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	6	20	6	20	6	20	6	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94	94	94	94	94	94	94	94	94	94	94
Detector 2 Size(ft)	6	6	6	6	6	6	6	6	6	6	6
Detector 2 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 2 Channel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Extend (s)	Perm	pm+pt	pm+pt	pm+pt	pm+pt	pm+pt	pm+pt	pm+pt	Perm	Perm	Perm
Turn Type	2	1	6	6	3	8	8	4	4	4	4
Protected Phases	2	2	1	6	6	3	8	8	4	4	4
Permitted Phases	2	2	1	6	6	3	8	8	4	4	4
Detector Phase											

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
7: Sheridan Drive & Mill Street 4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase	4.0	4.0	1.0	4.0	1.0	4.0	1.0	4.0	1.0	4.0	4.0
Minimum Initial (s)	28.3	28.3	6.2	28.3	6.2	28.3	6.2	34.2	34.2	34.2	34.2
Minimum Split (s)	50.0	50.0	0.0	15.0	65.0	0.0	25.0	70.0	0.0	45.0	45.0
Total Split (s)	37.0%	37.0%	0.0%	11.1%	48.1%	0.0%	18.5%	51.9%	0.0%	33.3%	33.3%
Total Split (%)	44.5	44.5	10.7	59.5	19.8	64.8	39.8	39.8	39.8	39.8	39.8
Maximum Green (s)	4.3	4.3	3.2	4.3	3.2	4.3	3.2	3.2	3.2	3.2	3.2
Yellow Time (s)	1.2	1.2	1.1	1.2	1.1	1.2	2.0	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	5.5	5.5	4.0	4.3	5.5	4.0	5.2	5.2	4.0	5.2	5.2
Total Lost Time (s)	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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
Recall Mode	None	None	None	None	None	None	Max	Max	Max	Max	Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0	15.0	15.0	15.0	15.0	22.0	22.0	22.0	22.0	22.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0	0	0	0
Act Effct Green (s)	45.1	45.1	60.7	59.5	64.8	64.8	39.8	39.8	39.8	39.8	39.8
Actuated G/C Ratio	0.33	0.33	0.45	0.44	0.48	0.48	0.29	0.29	0.29	0.29	0.29
v/c Ratio	0.23	1.34	0.70	0.99	0.28	0.30	0.13	0.19	0.13	0.19	0.19
Control Delay	46.1	195.7	45.9	58.5	21.7	22.7	36.4	34.3	36.4	34.3	34.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.1	195.7	45.9	58.5	21.7	22.7	36.4	34.3	36.4	34.3	34.3
LOS	D	F	D	E	C	C	D	D	D	D	C
Approach Delay	194.5	F	57.5	E	22.3	C	34.9	C	34.9	C	C
Approach LOS	F	F	E	E	C	C	C	C	C	C	C
Intersection Summary	Other										
Area Type:	Other										
Cycle Length:	135										
Actuated Cycle Length:	135										
Natural Cycle:	100										
Control Type:	Semi Act-Uncoordinated										
Maximum v/c Ratio:	1.34										
Intersection Signal Delay:	109.8										
Intersection Capacity Utilization:	75.8%										
Analysis Period (min):	15										



Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
8: Sheridan Drive & North Forest Road

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	138	1273	266	305	1159	43	286	464	82	30	497
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	405	170	260	0	180	0	180	265	180	200	200
Storage Lanes	1	1	1	0	1	0	1	1	1	1	1
Taper Length (ft)	200	25	200	25	200	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95
Flt Protected	0.950		0.850	0.950	0.995		0.850	0.950	0.850		0.850
Satd. Flow (prot)	1770	3539	1583	1770	3522	0	1770	1863	1583	1770	3539
Flt Permitted	0.073		0.068	0.182			0.182	0.175			0.175
Satd. Flow (perm)	136	3539	1583	127	3522	0	339	1863	1583	326	3539
Right Turn on Red	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Satd. Flow (RTOR)		131		3		3		70		70	213
Link Speed (mph)	45		45		45		40		40		35
Link Distance (ft)	971		2219		547		9.3		6.9		354
Travel Time (s)	14.7		33.6		9.3		0.175		0.175		6.9
Peak Hour Factor	0.94	0.94	0.94	0.93	0.93	0.93	0.89	0.89	0.89	0.95	0.95
Adj. Flow (vph)	147	1354	283	328	1246	46	321	521	92	32	523
Shared Lane Traffic (%)											
Lane Group Flow (vph)	147	1354	283	328	1292	0	321	521	92	32	523
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset(ft)	16		16		16		16		16		16
Crosswalk Width(ft)	16		16		16		16		16		16
Two way Left Turn Lane	Yes		Yes		Yes		Yes		Yes		Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	1	2	9	15	1	2	9	15
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru
Leading Detector (ft)	20	100	20	20	100	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	6	20	20	6	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94		94		94		94		94		94
Detector 2 Size(ft)	6		6		6		6		6		6
Detector 2 Type	CI+EX		CI+EX		CI+EX		CI+EX		CI+EX		CI+EX
Detector 2 Channel											
Detector 2 Extend (s)	0.0		0.0		0.0		0.0		0.0		0.0
Turn Type	pm+pt	Perm	pm+pt	pm+pt	Perm	pm+pt	Perm	pm+pt	Perm	pm+pt	Perm
Protected Phases	1	6	5	2	7	4	3	8			8
Permitted Phases	6	6	6	2	4	4	4	8	8	8	8
Detector Phase	1	6	6	5	2	7	4	4	4	3	8

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
8: Sheridan Drive & North Forest Road

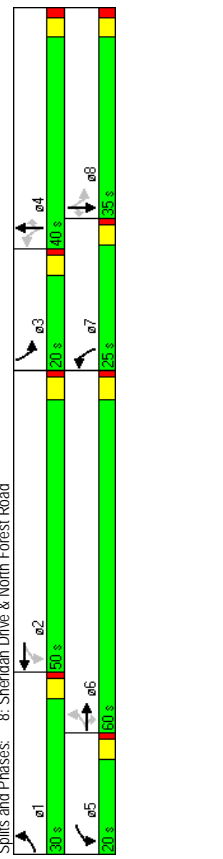
4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.3	27.9	27.9	8.3	27.9	8.3	27.9	27.9	27.9	8.3	27.9
Total Split (s)	30.0	60.0	60.0	20.0	50.0	0.0	25.0	40.0	40.0	20.0	35.0
Total Split (%)	21.4%	42.9%	42.9%	14.3%	35.7%	0.0%	17.9%	28.6%	28.6%	14.3%	25.0%
Maximum Green (s)	25.7	54.9	54.9	15.7	44.9		20.7	34.9	34.9	15.7	29.9
Yellow Time (s)	3.2	3.9	3.9	3.2	3.9		3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.1	1.2	1.1	1.2	1.1		1.1	1.1	1.1	1.1	1.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.3	5.1	5.1	4.3	5.1		4.3	5.1	5.1	4.3	5.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	None	Max	None		None	None	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0	15.0	15.0	15.0		15.0	15.0	15.0	15.0	15.0
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0	0	0	0
Act Effct Green (s)	68.0	54.9	54.9	73.7	58.4		51.3	43.4	43.4	33.4	25.6
Actuated G/C Ratio	0.50	0.40	0.40	0.54	0.43		0.38	0.32	0.32	0.25	0.19
v/c Ratio	0.68	0.94	0.39	1.27	0.85		0.93	0.87	0.17	0.21	0.78
Control Delay	43.1	53.3	17.0	181.1	42.3		67.0	61.1	12.7	30.6	61.3
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	43.1	53.3	17.0	181.1	42.3		67.0	61.1	12.7	30.6	61.3
LOS	D	D	B	F	D		E	E	B	C	E
Approach Delay	46.7		70.4		70.4		58.4		70.4		45.5
Approach LOS	D		E		E		E		E		D

Intersection Summary

Area Type:	Other
Cycle Length:	140
Actuated Cycle Length:	135.7
Natural Cycle:	125
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	1.27
Intersection Signal Delay:	56.2
Intersection Capacity Utilization:	97.3%
Analysis Period (min):	15

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
9: Proposed Access Driveway & North Forest Road

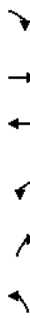
4/24/2014



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			4		
Volume (vph)	10	18	28	623	714	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Flt	0.913			0.997		
Flt Protected	0.983			0.998		
Satd. Flow (prot)	1672	0	0	1859	1857	0
Flt Permitted	0.983			0.998		
Satd. Flow (perm)	1672	0	0	1859	1857	0
Link Speed (mph)	30			35	35	
Link Distance (ft)	245			310	198	
Travel Time (s)	5.6			6.0	3.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	20	30	677	776	18
Shared Lane Traffic (%)						
Lane Group Flow (vph)	31	0	0	707	794	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	Free	Free	9
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	65.5%					
Analysis Period (min)	15					
	ICU Level of Service C					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
9: Proposed Access Driveway & North Forest Road

4/24/2014



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			4		
Volume (veh/h)	10	18	28	623	714	17
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	20	30	677	776	18
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)				None	None	
Median type				None	None	
Median storage (veh)				664		
Upstream signal (ft)						
pX, platoon unblocked	0.69					
vC, conflicting volume	1523	785	795			
vC1, stage 1 cont vol						
vC2, stage 2 cont vol						
vCu, unblocked vol	1534	785	795			
IC, single (s)	6.4	6.2	4.1			
IC, 2 stage (s)						
IF (s)	3.5	3.3	2.2			
p0 queue free %	87	95	96			
cM capacity (veh/h)	85	393	827			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	30	708	795			
Volume Left	11	30	0			
Volume Right	20	0	18			
cSH	171	827	1700			
Volume to Capacity	0.18	0.04	0.47			
Queue Length 95th (ft)	16	3	0			
Control Delay (s)	30.5	1.0	0.0			
Lane LOS	D	A				
Approach Delay (s)	30.5	1.0	0.0			
Approach LOS	D					
Intersection Summary						
Average Delay	1.1					
Intersection Capacity Utilization	65.5%					
ICU Level of Service	C					
Analysis Period (min)	15					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
10: Sheridan Drive & Proposed Access Driveway

4/24/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	32	1651	13	5	1594	45	13	0	17	13	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	350	0	75	0	0	0	0	0	0	0	0
Storage Lanes	1	0	1	0	0	0	0	0	0	0	0
Taper Length (ft)	25	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Flt	0.950	0.999	0.950	0.950	0.996	0.950	0.922	0.919	0.979	0.980	0.980
Satd. Flow (prot)	1770	3536	0	1770	3525	0	1681	0	1681	0	1678
Flt Permitted	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950
Satd. Flow (perm)	1770	3536	0	1770	3525	0	1681	0	1681	0	1678
Link Speed (mph)	45	45	45	45	45	45	30	30	30	30	30
Link Distance (ft)	635	635	635	697	697	697	278	278	278	204	204
Travel Time (s)	9.6	10.6	10.6	10.6	10.6	10.6	6.3	6.3	6.3	4.6	4.6
Adj. Flow (vph)	37	1898	15	5	1696	48	17	0	23	14	0
Shared Lane Traffic (%)	0.87	0.87	0.87	0.94	0.94	0.94	0.75	0.75	0.75	0.92	0.92
Lane Group Flow (vph)	37	1913	0	5	1744	0	40	0	40	0	35
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Right	Left	Left	Right	Left	Left	Right	Left	Right
Median Width (ft)	12	12	12	12	12	12	0	0	0	0	0
Link Offset (ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width (ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	15	9	15	15	15	9	15	15
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	56.1%
Analysis Period (min)	15

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
10: Sheridan Drive & Proposed Access Driveway

4/24/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (veh/h)	32	1651	13	5	1594	45	13	0	17	13	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.87	0.87	0.87	0.94	0.94	0.94	0.75	0.75	0.75	0.92	0.92
Hourly flow rate (vph)	37	1898	15	5	1696	48	17	0	23	14	0
Pedestrians											
Lane Width (ft)											
Walking Speed (ft/s)											
Percent Blockage											
Right turn flare (veh)											
Median type	TWLT	TWLT	TWLT	TWLT	TWLT	TWLT	TWLT	TWLT	TWLT	TWLT	TWLT
Median storage (veh)	2	2	2	2	2	2	2	2	2	2	2
Upstream signal (ft)	635	635	635	635	635	635	635	635	635	635	635
pX, platoon unblocked				0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72
vC1, conflicting volume	1744	1913	1913	2858	3733	956	2775	3717	872	1730	1730
vC2, stage 2 cont vol	1744	1486	1486	2802	4021	154	2687	3998	872	1045	1986
vCu, unblocked vol	4.1	4.1	4.1	7.5	6.5	6.9	7.5	6.5	6.5	6.5	6.9
IC, 2 stage (s)	2.2	2.2	2.2	3.5	4.0	3.3	3.5	4.0	3.3	4.0	3.3
p0 queue free %	90	98	98	74	100	96	83	100	93	100	93
cM capacity (veh/h)	356	322	322	68	68	68	620	85	76	294	294

Direction, Lane #							
EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
37	1265	648	5	1130	613	40	35
Volume Total	37	0	0	5	0	17	14
Volume Left	0	15	0	0	48	23	21
cSH	356	1700	1700	322	1700	1700	137
Volume to Capacity	0.10	0.74	0.38	0.02	0.66	0.36	0.29
Queue Length 95th (ft)	9	0	0	1	0	0	28
Control Delay (s)	16.3	0.0	0.0	16.4	0.0	0.0	41.8
Lane LOS	C	C	C	E	E	E	E
Approach Delay (s)	0.3	0.0	0.0	41.8	36.8	E	E
Approach LOS	E	E	E	E	E	E	E

Intersection Summary	
Average Delay	1.0
Intersection Capacity Utilization	56.1%
Analysis Period (min)	15
ICU Level of Service	B

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
11: Sheridan Drive & Frankhauser Road

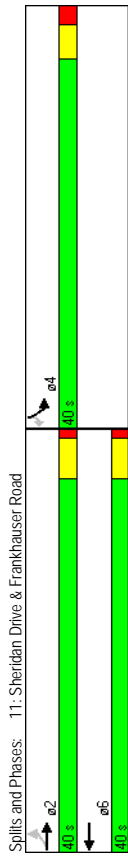
4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (vph)	77	1636	1585	41	60	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105	0	0	0	0	50
Storage Lanes	1	0	0	0	1	1
Taper Length (ft)	65	25	25	25	25	25
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Flt Permitted	0.950	0.996	0.950	0.950	0.850	0.850
Satd. Flow (prot)	1770	3539	3525	0	1770	1583
Flt Permitted	0.098	0.950	0.950	0.950	0.950	0.950
Satd. Flow (perm)	183	3539	3525	0	1770	1583
Right Turn on Red		Yes	Yes	Yes	Yes	Yes
Satd. Flow (RTOR)		4	4	4	4	4
Link Speed (mph)	45	45	45	30	30	30
Link Distance (ft)	101.4	635	828	18.8	18.8	18.8
Travel Time (s)	15.4	9.6	18.8	18.8	18.8	18.8
Peak Hour Factor	0.90	0.90	0.91	0.91	0.82	0.82
Adj. Flow (vph)	86	1818	1742	45	73	79
Shared Lane Traffic (%)						
Lane Group Flow (vph)	86	1818	1787	0	73	79
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Right
Median Width(ft)	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	100	100	9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Left	Right	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94	94	94	6	6	6
Detector 2 Size(ft)	6	6	6	6	6	6
Detector 2 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 2 Channel						
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	Perm	Perm	Perm	Perm	Perm
Protected Phases	2	2	6	4	4	4
Permitted Phases	2	2	6	4	4	4
Detector Phase	2	2	6	4	4	4

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
11: Sheridan Drive & Frankhauser Road

4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	1.0	1.0
Minimum Split (s)	40.0	40.0	40.0	40.0	31.1	31.1
Total Split (s)	40.0	40.0	40.0	0.0	40.0	40.0
Total Split (%)	50.0%	50.0%	50.0%	0.0%	50.0%	50.0%
Maximum Green (s)	35.2	35.2	35.2	34.9	34.9	34.9
Yellow Time (s)	3.9	3.9	3.9	3.2	3.2	3.2
All-Red Time (s)	0.9	0.9	0.9	1.9	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.8	4.8	4.8	4.0	5.1	5.1
Lead-Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	C-Max	C-Max	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0	15.0	19.0	19.0	19.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effct Green (s)	64.0	64.0	64.0	9.2	9.2	9.2
Actuated g/C Ratio	0.80	0.80	0.80	0.12	0.12	0.12
v/c Ratio	0.59	0.64	0.63	0.36	0.42	0.42
Control Delay	27.9	6.1	6.0	36.5	37.4	37.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.9	6.1	6.0	36.5	37.4	37.4
LOS	C	A	A	D	D	D
Approach Delay	7.1	6.0	6.0	36.9	36.9	36.9
Approach LOS	A	A	A	D	D	D
Intersection Summary	Other					
Area Type:	Other					
Cycle Length:	80					
Actuated Cycle Length:	80					
Offset:	55 (69%), Referenced to phase 2:EBTL and 6:WBT, Start of Green					
Natural Cycle:	110					
Control Type:	Actuated-Coordinated					
Maximum v/c Ratio:	0.64					
Intersection Signal Delay:	7.8					
Intersection Capacity Utilization:	65.0%					
Analysis Period (min):	15					



Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
12: Sheridan Drive & I-290 NB

4/24/2014

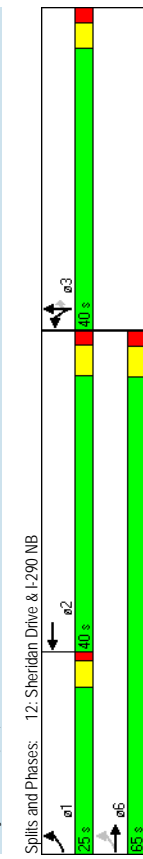
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	355	1326	0	0	1086	614	317	0	409	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	0	0	230	0	0	0	0	0	0
Storage Lanes	1	0	0	0	1	0	0	0	0	0	0
Taper Length (ft)	105	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.95	0.91	0.95	0.850	1.00	1.00
Flt Protected	0.950				0.946			0.950	0.987		
Satd. Flow (prot)	1770	5085	0	0	4811	0	1681	1489	1504	0	0
Flt Permitted	0.082						0.950	0.987			
Satd. Flow (perm)	153	5085	0	0	4811	0	1681	1489	1504	0	0
Right Turn on Red		Yes			Yes			Yes	Yes		Yes
Satd. Flow (RTOR)		144			45			45	45		30
Link Speed (mph)		45			45			30	30		30
Link Distance (ft)		610			193			830	423		423
Travel Time (s)		9.2			2.9			18.9	9.6		9.6
Peak Hour Factor	0.99	0.99	0.99	0.92	0.92	0.92	0.80	0.80	0.80	0.92	0.92
Adj. Flow (vph)	359	1339	0	0	1180	667	396	0	511	0	0
Shared Lane Traffic (%)					20%			43%			
Lane Group Flow (vph)	359	1339	0	0	1847	0	317	299	291	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Right
Median Width(ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane											
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	15	9	15	15	9	15	15	9
Number of Detectors	1	2			2		1	2	1		
Detector Template	Left	Thru			Thru		Left	Thru	Right		
Leading Detector (ft)	20	100			100		20	100	20		
Trailing Detector (ft)	0	0			0		0	0	0		
Detector 1 Position(ft)	0	0			0		0	0	0		
Detector 1 Size(ft)	20	6			6		20	6	20		
Detector 1 Type	Ch+Ex	Ch+Ex			Ch+Ex		Ch+Ex	Ch+Ex	Ch+Ex		
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0	0.0		
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0	0.0		
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0	0.0		
Detector 2 Position(ft)	94				94				94		
Detector 2 Size(ft)	6				6				6		
Detector 2 Type	Ch+Ex				Ch+Ex				Ch+Ex		
Detector 2 Channel											
Detector 2 Extend (s)	0.0				0.0				0.0		
Turn Type	pm+pt				custom				Perm		
Protected Phases	1	6			2		3	3	3		
Permitted Phases	6				3		3	3	3		
Detector Phase	1	6			2		3	3	3		

Lanes, Volumes, Timings
SRF & Associates
Alternative 2
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
12: Sheridan Drive & I-290 NB

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	1.0	4.0			4.0		4.0	4.0	4.0		4.0
Minimum Split (s)	6.2	33.9			27.8		29.0	29.0	29.0		29.0
Total Split (s)	25.0	65.0	0.0	0.0	40.0	0.0	40.0	40.0	40.0	0.0	40.0
Total Split (%)	23.8%	61.9%	0.0%	0.0%	38.1%	0.0%	38.1%	38.1%	38.1%	0.0%	38.1%
Maximum Green (s)	20.7	59.1			34.2		34.8	34.8	34.8		34.8
Yellow Time (s)	3.2	3.9			3.9		3.2	3.2	3.2		3.2
All-Red Time (s)	1.1	2.0			1.9		2.0	2.0	2.0		2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.3	5.9	4.0	4.0	5.8	4.0	5.2	5.2	5.2	4.0	4.0
Lead/Lag	Lead	Lag			Lag						
Vehicle Extension (s)	2.0	3.0			3.0		2.0	2.0	2.0		2.0
Recall Mode	None	C-Max			C-Max		None	None	None		None
Walk Time (s)	7.0				7.0						
Flash Dont Walk (s)	21.0				15.0						
Pedestrian Calls (#/hr)	0				0						
Act Effct Green (s)	69.8	68.2			44.8		25.7	25.7	25.7		25.7
Actuated g/C Ratio	0.66	0.65			0.43		0.24	0.24	0.24		0.24
v/c Ratio	0.90	0.41			0.87		0.77	0.75	0.72		0.72
Control Delay	54.5	10.1			32.7		48.9	42.1	40.2		40.2
Queue Delay	0.0	0.0			0.0		0.0	0.0	0.0		0.0
Total Delay	54.5	10.1			32.7		48.9	42.1	40.2		40.2
LOS	D	B			C		D	D	D		D
Approach Delay		19.5			32.7				43.8		
Approach LOS		B			C				D		



Lanes, Volumes, Timings
SRF & Associates
Alternative 2
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
13: Sheridan Drive & Harlem Road

4/24/2014

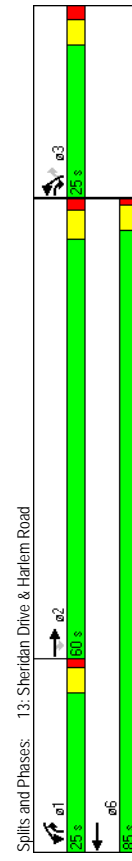
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔↔	↔↔	↔↔	↔↔	↔↔
Volume (vph)	977	604	403	1000	267	703
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	215	0	140	0	0
Storage Lanes	1	1	1	2	2	2
Taper Length (ft)	230	100	100	100	25	25
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	0.88
Flt Protected	0.850		0.950		0.850	
Satd. Flow (prot)	3539	1583	3433	3539	3433	2787
Flt Permitted	0.950		0.950		0.950	
Satd. Flow (perm)	3539	1583	3433	3539	3433	2787
Right Turn on Red	No					Yes
Satd. Flow (RTOR)						131
Link Speed (mph)	45		45		35	
Link Distance (ft)	314		610		338	
Travel Time (s)	4.8		9.2		6.6	
Peak Hour Factor	0.98	0.98	0.95	0.95	0.85	0.85
Adj. Flow (vph)	997	616	424	1053	314	827
Shared Lane Traffic (%)						
Lane Group Flow (vph)	997	616	424	1053	314	827
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12		24		24	
Link Offset(ft)	0		0		0	
Crosswalk Width(ft)	16		16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15	15	15	15	9
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (ft)	100	20	20	100	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	6	20	20	6	20	20
Detector 1 Type	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Ch+Ex			Ch+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type		pm+ov	Prot			pm+ov
Protected Phases	2	3	1	6	3	1
Permitted Phases	2	3	1	6	3	1
Detector Phase	2	3	1	6	3	1

Lanes, Volumes, Timings
SRF & Associates
Alternative 2
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
13: Sheridan Drive & Harlem Road

4/24/2014

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Switch Phase						
Minimum Initial (s)	1.0	1.0	1.0	4.0	1.0	1.0
Minimum Split (s)	30.5	6.2	5.3	32.3	6.2	5.3
Total Split (s)	60.0	25.0	25.0	85.0	25.0	25.0
Total Split (%)	54.5%	22.7%	22.7%	77.3%	22.7%	22.7%
Maximum Green (s)	54.5	19.8	20.7	80.7	19.8	20.7
Yellow Time (s)	3.9	3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.6	2.0	1.1	1.1	2.0	1.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.2	4.3	4.3	5.2	4.3
Lead/Lag	Lag	Lead	Lead	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	C-Max	None	None	None	None	None
Walk Time (s)	7.0		7.0			
Flash Dont Walk (s)	18.0		21.0			
Pedestrian Calls (#/hr)	0		0			
Act Effct Green (s)	62.2	82.4	18.1	85.8	14.7	38.0
Actuated g/C Ratio	0.57	0.75	0.16	0.78	0.13	0.35
v/c Ratio	0.50	0.52	0.75	0.38	0.68	0.79
Control Delay	16.6	8.0	52.4	4.5	53.0	32.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.6	8.0	52.4	4.5	53.0	32.4
LOS	B	A	D	A	D	C
Approach Delay	13.3			18.3		38.0
Approach LOS	B			B		D



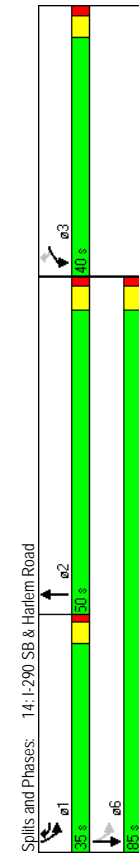
Spills and Phases: 13: Sheridan Drive & Harlem Road
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
14: 1-290 SB & Harlem Road
4/24/2014

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (vph)	234	369	566	11	482	490
Ideal Flow (vppf)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	0	0	330	0
Storage Lanes	1	1	0	0	1	0
Taper Length (ft)	25	25	25	25	75	0
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	3529	0	1770	3539
Flt Permitted	0.950				0.168	
Satd. Flow (perm)	1770	1583	3529	0	313	3539
Right Turn on Red	Yes	Yes	Yes	Yes		
Satd. Flow (RTOR)	72	2	2	2		
Link Speed (mph)	30	35	35	35	35	35
Link Distance (ft)	333	250	250	456	456	456
Travel Time (s)	7.6	4.9	4.9	8.9	8.9	8.9
Peak Hour Factor	0.69	0.69	0.77	0.77	0.92	0.92
Adj. Flow (vph)	339	535	735	14	524	533
Shared Lane Traffic (%)						
Lane Group Flow (vph)	No	No	No	No	No	No
Enter Blocked Intersection	Left	Right	Left	Right	Left	Left
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	9	9	15	15
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Left	Thru	Thru
Leading Detector (ft)	20	20	100	20	100	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	6	6
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	0.0	0.0	94	0.0	0.0	94
Detector 2 Size(ft)	6	6	6	6	6	6
Detector 2 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 2 Channel						
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	pm+ov				pm+pl	
Protected Phases	3	1	2	1	1	6
Permitted Phases	3	1	2	1	6	6
Detector Phase	3	1	2	1	6	6

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
14: 1-290 SB & Harlem Road
4/24/2014

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Switch Phase	↔	↔	↔	↔	↔	↔
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	9.2	30.6	9.2	21.0	21.0
Total Split (s)	40.0	35.0	50.0	0.0	35.0	85.0
Total Split (%)	32.0%	28.0%	40.0%	0.0%	28.0%	68.0%
Maximum Green (s)	35.2	30.7	45.0	30.7	80.0	80.0
Yellow Time (s)	3.2	3.2	3.6	3.2	3.6	3.6
All-Red Time (s)	1.6	1.1	1.4	1.1	1.4	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.8	4.3	5.0	4.0	4.3	5.0
Lead/Lag	Lead	Lead	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Min	None	None	None
Walk Time (s)	10.0		10.0			
Flash Dont Walk (s)	15.0		15.0			
Pedestrian Calls (#/hr)	0		0			
Act Effct Green (s)	23.4	54.6	27.0	58.4	57.6	57.6
Actuated g/C Ratio	0.26	0.60	0.30	0.64	0.63	0.63
v/c Ratio	0.75	0.55	0.72	0.85	0.24	0.24
Control Delay	44.1	12.4	34.3	34.2	8.1	8.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.1	12.4	34.3	34.2	8.1	8.1
LOS	D	B	C	C	A	A
Approach Delay	24.7	34.3	34.3	21.1	21.1	21.1
Approach LOS	C	C	C	C	C	C
Intersection Summary						
Area Type:	Other					
Cycle Length:	125					
Actuated Cycle Length:	91.4					
Natural Cycle:	80					
Control Type:	Actuated-Uncoordinated					
Maximum v/c Ratio:	0.85					
Intersection Signal Delay:	25.9					
Intersection Capacity Utilization:	67.4%					
Analysis Period (min):	15					



Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
17: Proposed Access Driveway & Frankhauser Road

4/24/2014

	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W					4
Volume (vph)	33	3	75	43	0	92
Ideal Flow (vpph)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Flt	0.950		0.951			
Flt Protected	0.956					
Satd. Flow (prot)	1763	0	1771	0	0	1863
Flt Permitted	0.956					
Satd. Flow (perm)	1763	0	1771	0	0	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	236		828			109
Travel Time (s)	5.4		18.8			2.5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	36	3	82	47	0	100
Shared Lane Traffic (%)						
Lane Group Flow (vph)	39	0	129	0	0	100
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	15
Sign Control	Stop	Free	Free	Free	Free	Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	16.6%					
Analysis Period (min)	15					
ICU Level of Service A						

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
17: Proposed Access Driveway & Frankhauser Road

4/24/2014

	WBL	WBR	NBT	NBR	SBL	SBT
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W					4
Volume (veh/h)	33	3	75	43	0	92
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	36	3	82	47	0	100
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)			828			
pX, platoon unblocked						
vC, conflicting volume	205	105			128	
vC1, stage 1 cont vol						
vC2, stage 2 cont vol	205	105			128	
vCu, unblocked vol	6.4	6.2			4.1	
IC, single (s)						
IC, 2 stage (s)						
IF (s)	3.5	3.3			2.2	
p0 queue free %	95	100			100	
cM capacity (veh/h)	784	950			1458	
Direction, Lane #						
	WB 1	NB 1	SB 1			
Volume Total	39	128	100			
Volume Left	36	0	0			
Volume Right	3	47	0			
cSH	795	1700	1458			
Volume to Capacity	0.05	0.08	0.00			
Queue Length 95th (ft)	4	0	0			
Control Delay (s)	9.8	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	9.8	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay	1.4					
Intersection Capacity Utilization	16.6%					
ICU Level of Service	A					
Analysis Period (min)	15					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
56: Maple Road & Proposed North Driveway 4/24/2014

	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	↔↔	↔↔	↔↔	↔↔	↔↔	↔↔	
Volume (vph)	1299	35	45	984	18	27	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0	225	0	0	150	0	
Storage Lanes	0	1	0	1	1	1	
Taper Length (ft)	25	25	25	25	25	25	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00	
Flt Protected	0.95	0.95	0.95	0.95	0.95	0.850	
Satd. Flow (prot)	3525	0	1770	3539	1770	1583	
Flt Permitted	0.95	0.95	0.95	0.95	0.95	0.95	
Satd. Flow (perm)	3525	0	1770	3539	1770	1583	
Link Speed (mph)	45	45	45	45	30	30	
Link Distance (ft)	1000	928	928	928	337	337	
Travel Time (s)	15.2	14.1	14.1	14.1	7.7	7.7	
Adj. Flow (vph)	1412	38	49	1070	20	29	
Shared Lane Traffic (%)	1450	0	49	1070	20	29	
Lane Group Flow (vph)	No	No	No	No	No	No	
Enter Blocked Intersection	Left	Right	Left	Left	Left	Right	
Lane Alignment	12	12	12	12	12	12	
Median Width(ft)	0	0	0	0	0	0	
Link Offset(ft)	16	16	16	16	16	16	
Crosswalk Width(ft)	Yes	Yes	Yes	Yes	Yes	Yes	
Two way Left Turn Lane	1.00	1.00	1.00	1.00	1.00	1.00	
Headway Factor	9	15	15	15	15	9	
Turning Speed (mph)	Free	Free	Free	Free	Stop	Stop	
Sign Control	Intersection Summary						
Area Type:	Other						
Control Type:	Unsignalized						
Intersection Capacity Utilization	47.4%						
Analysis Period (min)	15						
	ICU Level of Service: A						

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
56: Maple Road & Proposed North Driveway 4/24/2014

	EBT	EBR	WBL	WBT	NBL	NBR	
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	↔↔	↔↔	↔↔	↔↔	↔↔	↔↔	
Volume (veh/h)	1299	35	45	984	18	27	
Sign Control	Free	Free	Free	Free	Stop	Stop	
Grade	0%	0%	0%	0%	0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	1412	38	49	1070	20	29	
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)						6	
Median type				TWLTL			
Median storage (veh)	2			2			
Upstream signal (ft)							
pX, platoon unblocked					2064	725	
vC, conflicting volume					1431		
vC1, stage 1 conf vol					633		
vC2, stage 2 conf vol					2064	725	
vCu, unblocked vol					4.1	6.8	6.9
IC, single (s)					5.8		
IC, 2 stage (s)					2.2	3.5	3.3
IF (s)					89	88	92
p0 queue free %					463	170	368
cM capacity (veh/h)							
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	
Volume Total	941	509	49	535	535	49	
Volume Left	0	0	49	0	0	20	
Volume Right	0	38	0	0	0	29	
cSH	1700	1700	463	1700	1700	424	
Volume to Capacity	0.55	0.30	0.11	0.31	0.31	0.12	
Queue Length 95th (ft)	0	0	9	0	0	10	
Control Delay (s)	0.0	0.0	13.7	0.0	0.0	21.0	
Lane LOS			B			C	
Approach Delay (s)	0.0	0.6				21.0	
Approach LOS						C	
Intersection Summary							
Average Delay	0.6						
Intersection Capacity Utilization	47.4%						ICU Level of Service: A
Analysis Period (min)	15						

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
 59: Sheridan Drive & Proposed Access Driveway

4/24/2014



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	4	1677	1641	4	1	3
Volume (veh/h)	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	75	0	0	0	0	0
Storage Length (ft)	1	0	1	0	1	0
Storage Lanes	25	25	25	25	25	25
Taper Length (ft)	1.00	0.95	0.95	1.00	1.00	1.00
Lane Util. Factor	0.950		0.988		0.899	
Flt Protected	1770	3539	3539	0	1655	0
Satd. Flow (prot)	0.950		0.988		0.988	
Flt Permitted	1770	3539	3539	0	1655	0
Satd. Flow (perm)	45	45	30			
Link Speed (mph)	697	971	280			
Link Distance (ft)	10.6	14.7	6.4			
Travel Time (s)	4	1823	1784	4	1	3
Adj. Flow (vph)	4	1823	1788	0	4	0
Shared Lane Traffic (%)	No	Yes	Yes	No	No	No
Lane Group Flow (vph)	Left	Left	Right	Left	Right	Right
Enter Blocked Intersection	12	12	12	12	12	12
Lane Alignment	0	0	0	0	0	0
Median Width(ft)	16	16	16	16	16	16
Link Offset(ft)	Yes	Yes	Yes	Yes	Yes	Yes
Crosswalk Width(ft)	1.00	1.00	1.00	1.00	1.00	1.00
Two way Left Turn Lane	15	9	15	9	15	9
Headway Factor	Free	Free	Free	Free	Stop	Stop
Turning Speed (mph)						
Sign Control						
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	56.4%					
Analysis Period (min)	15					
ICU Level of Service:	B					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
 59: Sheridan Drive & Proposed Access Driveway

4/24/2014



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	4	1677	1641	4	1	3
Volume (veh/h)	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	75	0	0	0	0	0
Storage Length (ft)	1	0	1	0	1	0
Storage Lanes	25	25	25	25	25	25
Taper Length (ft)	1.00	0.95	0.95	1.00	1.00	1.00
Lane Util. Factor	0.950		0.988		0.899	
Flt Protected	1770	3539	3539	0	1655	0
Satd. Flow (prot)	0.950		0.988		0.988	
Flt Permitted	1770	3539	3539	0	1655	0
Satd. Flow (perm)	45	45	30			
Link Speed (mph)	697	971	280			
Link Distance (ft)	10.6	14.7	6.4			
Travel Time (s)	4	1823	1784	4	1	3
Adj. Flow (vph)	4	1823	1788	0	4	0
Shared Lane Traffic (%)	No	Yes	Yes	No	No	No
Lane Group Flow (vph)	Left	Left	Right	Left	Right	Right
Enter Blocked Intersection	12	12	12	12	12	12
Lane Alignment	0	0	0	0	0	0
Median Width(ft)	16	16	16	16	16	16
Link Offset(ft)	Yes	Yes	Yes	Yes	Yes	Yes
Crosswalk Width(ft)	1.00	1.00	1.00	1.00	1.00	1.00
Two way Left Turn Lane	15	9	15	9	15	9
Headway Factor	Free	Free	Free	Free	Stop	Stop
Turning Speed (mph)						
Sign Control						
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	56.4%					
Analysis Period (min)	15					
ICU Level of Service:	B					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
1: Maple Road & Millersport Hwy SB

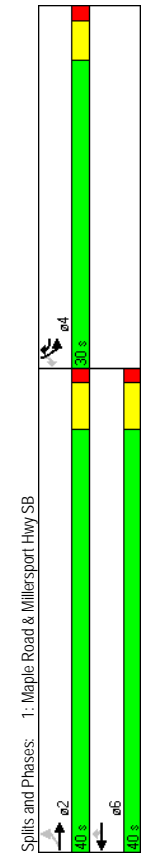
4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (vph)	18	591	832	310	29	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	0	0	0	0	0
Storage Lanes	1	1	1	1	1	1
Taper Length (ft)	35	100	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00
Flt Protected	0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	1583	1583
Flt Permitted	0.322			0.950		
Satd. Flow (perm)	600	3539	1583	1770	1583	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)		45	45	30		106
Link Speed (mph)		555	654	281		
Link Distance (ft)		8.4	9.9	6.4		
Travel Time (s)		0.91	0.96	0.96	0.78	0.78
Peak Hour Factor		20	649	867	323	37
Adj. Flow (vph)		20	649	867	323	37
Shared Lane Traffic (%)						
Lane Group Flow (vph)		20	649	867	323	37
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Right
Median Width(ft)	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16
Two way Left Turn Lane		Yes				
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	2	2	9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94	94	94	94	94	94
Detector 2 Size(ft)	6	6	6	6	6	6
Detector 2 Type	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 2 Channel						
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm			pm+ov	Perm	Perm
Protected Phases	2	6	6	4	4	4
Permitted Phases	2	2	6	4	4	4
Detector Phase	2	2	6	4	4	4

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
1: Maple Road & Millersport Hwy SB

4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	1.0	1.0	1.0
Minimum Split (s)	9.1	9.1	9.1	6.2	6.2	6.2
Total Split (s)	40.0	40.0	40.0	30.0	30.0	30.0
Total Split (%)	57.1%	57.1%	57.1%	42.9%	42.9%	42.9%
Maximum Green (s)	34.9	34.9	34.9	25.4	25.4	25.4
Yellow Time (s)	3.9	3.9	3.9	3.2	3.2	3.2
All-Red Time (s)	1.2	1.2	1.2	1.4	1.4	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	4.6	4.6	4.6
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Min	C-Min	C-Min	None	None	None
Act Effct Green (s)	52.8	52.8	52.8	7.0	7.5	7.5
Actuated g/C Ratio	0.75	0.75	0.75	1.00	0.11	0.11
v/c Ratio	0.04	0.24	0.33	0.20	0.19	0.40
Control Delay	2.9	3.0	5.7	0.3	30.0	11.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.9	3.0	5.7	0.3	30.0	11.3
LOS	A	A	A	A	C	B
Approach Delay						
Approach LOS	A	A	A	A	C	B
Intersection Summary						
Area Type:	Other					
Cycle Length:	70					
Offset:	5 (7%), Referenced to phase 2:EBTL and 6:WBT. Start of Green					
Natural Cycle:	40					
Control Type:	Actuated-Coordinated					
Maximum v/c Ratio:	0.40					
Intersection Signal Delay:	4.7					
Intersection LOS:	A					
Intersection Capacity Utilization:	36.2%					
Analysis Period (min):	15					



Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
 2: Maple Road & Millersport Hwy NB

4/24/2014

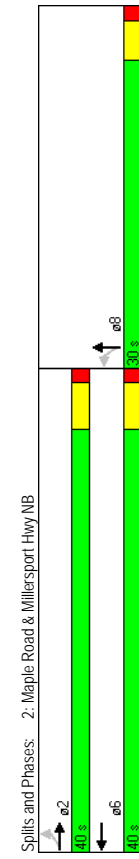
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	42	577	0	0	995	62	147	1	464	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	0	0	0	0	0	0	0	0	0
Storage Lanes	1	0	0	0	0	0	0	0	0	0	0
Taper Length (ft)	50	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.950				0.991		0.950		0.850		
Satd. Flow (prot)	1770	3539	0	0	3507	0	1770	1583	0	0	0
Flt Permitted	0.187				0.950		0.950		0	0	0
Right Turn on Red	348	3539	0	0	3507	0	1770	1583	0	0	0
Satd. Flow (RTOR)			Yes		Yes		Yes	Yes	Yes		Yes
Link Speed (mph)	45		13		45		30		30		30
Link Distance (ft)	654		1770		263		319		263		6.0
Travel Time (s)	9.9		26.8		7.3		7.3		6.0		6.0
Peak Hour Factor	0.85	0.85	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.92	0.92
Adj. Flow (vph)	49	679	0	0	1070	67	158	1	499	0	0
Shared Lane Traffic (%)											
Lane Group Flow (vph)	49	679	0	0	1137	0	158	500	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Left	Right	Left	Right
Median Width(ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9	15	9	15	9	15
Number of Detectors	1	2	2	2	2	2	2	2	2	2	2
Detector Template	Left	Thru	Thru	Left	Thru	Thru	Left	Thru	Thru	Left	Thru
Leading Detector (ft)	20	100	100	100	100	100	20	100	100	100	100
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	6	6	6	20	6	6	6	6
Detector 1 Type	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94			94		94		
Detector 2 Size(ft)	6			6			6		6		
Detector 2 Type	Ch+Ex			Ch+Ex			Ch+Ex		Ch+Ex		
Detector 2 Channel											
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm			Perm			Perm		Perm		
Protected Phases	2			6			8		8		
Permitted Phases	2			6			8		8		
Detector Phase	2			6			8		8		

Lanes, Volumes, Timings
 SRF & Associates
 Alternative 3
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
 2: Maple Road & Millersport Hwy NB

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	1.0	1.0	4.0	4.0	4.0	1.0	1.0	1.0	1.0	1.0	1.0
Minimum Split (s)	6.1	6.1	9.1	9.1	9.1	6.2	6.2	6.2	6.2	6.2	6.2
Total Split (s)	40.0	40.0	0.0	0.0	40.0	0.0	30.0	30.0	0.0	0.0	0.0
Total Split (%)	57.1%	57.1%	0.0%	0.0%	57.1%	0.0%	42.9%	42.9%	0.0%	0.0%	0.0%
Maximum Green (s)	34.9	34.9	34.9	34.9	34.9	25.4	25.4	25.4	25.4	25.4	25.4
Yellow Time (s)	3.9	3.9	3.9	3.9	3.9	3.2	3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.2	1.2	1.2	1.2	1.2	1.4	1.4	1.4	1.4	1.4	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	4.0	4.0	5.1	4.0	4.6	4.6	4.0	4.0	4.0
Lead-Lag											
Lead-Lag Optimize?											
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	None	None	None	None	None	None
Recall Mode	C-Min	C-Min	C-Min	C-Min	C-Min	None	None	None	None	None	None
Act Effct Green (s)	39.6	39.6	39.6	39.6	39.6	20.7	20.7	20.7	20.7	20.7	20.7
Actuated g/C Ratio	0.57	0.57	0.57	0.57	0.57	0.30	0.30	0.30	0.30	0.30	0.30
v/c Ratio	0.25	0.34	0.57	0.57	0.57	0.30	0.84	0.84	0.30	0.84	0.84
Control Delay	15.3	10.2	12.3	12.3	12.3	19.0	27.0	27.0	19.0	27.0	27.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.3	10.2	12.3	12.3	12.3	19.0	27.0	27.0	19.0	27.0	27.0
LOS	B	B	B	B	B	B	B	B	B	B	C
Approach Delay	B	B	B	B	B	B	B	B	B	B	C
Approach LOS	B	B	B	B	B	B	B	B	B	B	C
Intersection Summary											
Area Type:	Other										
Cycle Length:	70										
Actuated Cycle Length:	70										
Offset:	5 (7%), Referenced to phase 2:EBTL and 6:WBT, Start of Green										
Natural Cycle:	50										
Control Type:	Actuated-Coordinated										
Maximum v/c Ratio:	0.84										
Intersection Signal Delay:	15.1										
Intersection LOS:	B										
Intersection Capacity Utilization:	71.8%										
Analysis Period (min):	15										



Splits and Phases: 2: Maple Road & Millersport Hwy NB

Lanes, Volumes, Timings
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
3: Maple Road & Maplemere Road

4/24/2014

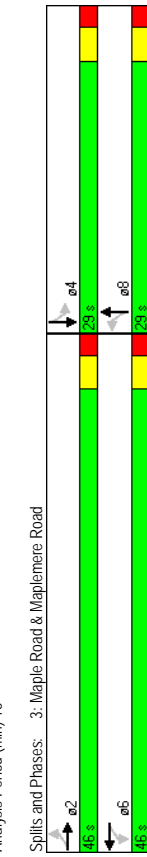
Lane Group	EBL	EFT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	21	906	46	12	1048	28	43	3	16	34	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	70	0	0	0	0	0	0	0	0
Storage Lanes	1	0	1	0	0	0	0	0	0	0	0
Taper Length (ft)	50	25	50	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Flt	0.993			0.996			0.965			0.957	
Flt Permitted	0.950		0.950				0.967			0.967	
Satd. Flow (prot)	1770	3514	0	1770	3525	0	1738	0	0	1724	0
Flt Permitted	0.203		0.228				0.739			0.733	
Right Turn on Red	378	3514	0	425	3525	0	1328	0	0	1307	0
Right Turn (RTOR)	Yes		Yes		Yes		Yes		Yes		Yes
Satd. Flow (RTOR)	11		6		25		25		28		28
Link Speed (mph)	45		45		30		30		30		30
Link Distance (ft)	1770		1106		378		402		402		402
Travel Time (s)	26.8		16.8		8.6		9.1		9.1		9.1
Peak Hour Factor	0.86	0.86	0.86	0.91	0.91	0.91	0.60	0.60	0.60	0.58	0.58
Adj. Flow (vph)	24	1053	53	13	1152	31	72	5	27	59	0
Shared Lane Traffic (%)											
Lane Group Flow (vph)	24	1106	0	13	1183	0	0	104	0	0	87
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	12		12		12		0	0	0	0	0
Link Offset(ft)	0		0		0		0	0	0	0	0
Crosswalk Width(ft)	16		16		16		16		16		16
Two way Left Turn Lane	Yes		Yes		Yes		Yes		Yes		Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9		15		9		15		9
Number of Detectors	1	2	1	2	1	2	1	2	1	2	2
Detector Template	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Thru
Leading Detector (ft)	20	100	20	100	20	100	20	100	20	100	100
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	6	20	6	20	6	20	6	6
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94		94		94		94		94		94
Detector 2 Size(ft)	6		6		6		6		6		6
Detector 2 Type	CI+EX		CI+EX		CI+EX		CI+EX		CI+EX		CI+EX
Detector 2 Channel											
Detector 2 Extend (s)	0.0		0.0		0.0		0.0		0.0		0.0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm
Protected Phases	2		6		6		8		8		4
Permitted Phases	2		6		6		8		8		4
Detector Phase	2		6		6		8		8		4

Lanes, Volumes, Timings
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
3: Maple Road & Maplemere Road

4/24/2014

Lane Group	EBL	EFT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	4.0		4.0		4.0		4.0		4.0		4.0
Minimum Split (s)	9.0		9.0		9.0		9.0		9.0		9.0
Minimum Split (%)	46.0		46.0		46.0		46.0		46.0		46.0
Total Split (s)	61.3%		61.3%		61.3%		61.3%		61.3%		61.3%
Total Split (%)	61.3%		61.3%		61.3%		61.3%		61.3%		61.3%
Maximum Green (s)	41.0		41.0		41.0		41.0		41.0		41.0
Yellow Time (s)	3.0		3.0		3.0		3.0		3.0		3.0
All-Red Time (s)	2.0		2.0		2.0		2.0		2.0		2.0
Lost Time Adjust (s)	0.0		0.0		0.0		0.0		0.0		0.0
Total Lost Time (s)	5.0		5.0		5.0		5.0		5.0		5.0
LeadLag											
Lead-Lag Optimize?											
Vehicle Extension (s)	3.0		3.0		3.0		3.0		3.0		3.0
Recall Mode	Min		Min		Min		None		None		None
Walk Time (s)	7.0		7.0		7.0		7.0		7.0		7.0
Flash Dont Walk (s)	15.0		15.0		15.0		15.0		15.0		15.0
Pedestrian Calls (#/hr)							0		0		0
Act Effct Green (s)	27.7		27.7		27.7		27.7		27.7		27.7
Actuated g/C Ratio	0.66		0.66		0.66		0.66		0.66		0.66
v/c Ratio	0.10		0.48		0.05		0.51		0.36		0.31
Control Delay	6.1		6.4		5.3		6.7		16.8		15.0
Queue Delay	0.0		0.0		0.0		0.0		0.0		0.0
Total Delay	6.1		6.4		5.3		6.7		16.8		15.0
LOS	A		A		A		A		B		B
Approach Delay	6.4		6.4		6.7		6.8		15.0		15.0
Approach LOS	A		A		A		A		B		B
Intersection Summary	Other										
Area Type:	Other										
Cycle Length:	75										
Actuated Cycle Length:	42.2										
Natural Cycle:	55										
Control Type:	Actuated-Uncoordinated										
Maximum v/c Ratio:	0.51										
Intersection Signal Delay:	7.3										
Intersection Capacity Utilization:	42.3%										
Analysis Period (min):	15										



Lanes, Volumes, Timings
SRF & Associates
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
4: Maple Road & Donna Lea Blvd

4/24/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕↕	↕↕	↕↕	↕↕	↕↕	↕↕
Volume (vph)	951	6	13	1063	24	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	50	0	0	0	0
Storage Lanes	0	1	0	1	0	0
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Flt Protected	0.999		0.950		0.904	
Flt Permitted			0.950		0.986	
Satd. Flow (prot)	3536	0	1770	3539	1660	0
Satd. Flow (perm)	3536	0	1770	3539	1660	0
Link Speed (mph)	45		45		30	
Link Distance (ft)	1106		1002		355	
Travel Time (s)	16.8		15.2		8.1	
Peak Hour Factor	0.79	0.79	0.87	0.87	0.76	0.76
Adj. Flow (vph)	1204	8	15	1222	32	80
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1212	0	15	1222	112	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12		12		12	
Link Offset(ft)	0		0		0	
Crosswalk Width(ft)	16		16		16	
Two way Left Turn Lane	Yes		Yes		Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15	15	15	15	9
Sign Control	Free	Free	Free	Free	Stop	Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	41.1%					
Analysis Period (min)	15					
	ICU Level of Service: A					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
4: Maple Road & Donna Lea Blvd

4/24/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕↕	↕↕	↕↕	↕↕	↕↕	↕↕
Volume (veh/h)	951	6	13	1063	24	61
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%		0%		0%	
Peak Hour Factor	0.79	0.79	0.87	0.87	0.76	0.76
Hourly flow rate (vph)	1204	8	15	1222	32	80
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLT		TWLT		2	
Median storage (veh)	2		2		2	
Upstream signal (ft)	1106		1106		641	
pX, platoon unblocked			0.86		0.86	0.86
vC, conflicting volume			1211		1848	606
vC1, stage 1 conf vol					1208	
vC2, stage 2 conf vol					641	
vCu, unblocked vol			926		1664	223
IC, single (s)			4.1		6.8	6.9
IC, 2 stage (s)					5.8	
IF (s)			2.2		3.5	3.3
p0 queue free %			98		88	88
cM capacity (veh/h)			633		256	673
Direction, Lane #						
	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	803	409	15	611	611	112
Volume Left	0	0	15	0	0	32
Volume Right	0	8	0	0	0	80
cSH	1700	1700	633	1700	1700	461
Volume to Capacity	0.47	0.24	0.02	0.36	0.36	0.24
Queue Length 95th (ft)	0	0	2	0	0	24
Control Delay (s)	0.0	0.0	10.8	0.0	0.0	15.3
Lane LOS			B			C
Approach Delay (s)	0.0		0.1			15.3
Approach LOS			C			C
Intersection Summary						
Average Delay	0.7					
Intersection Capacity Utilization	41.1%					
Analysis Period (min)	15					
	ICU Level of Service: A					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
5: Maple Road & Audubon Golf Club

4/24/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	1	1021	4	1	1066	2	13	0	3	1	0
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	100	0	50	0	0	0	0	0	0	0	0
Storage Length (ft)	1	0	1	0	0	0	0	0	0	0	0
Storage Lanes	25	25	25	25	25	25	25	25	25	25	25
Taper Length (ft)	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.999						0.976				
Flt Protected	0.950			0.950			0.960			0.950	
Satd. Flow (prot)	1770	3536	0	1770	3539	0	1745	0	1745	0	1770
Flt Permitted	0.950			0.950			0.960			0.950	
Satd. Flow (perm)	1770	3536	0	1770	3539	0	1745	0	1745	0	1770
Link Speed (mph)	45	45	45	45	45	45	30	30	30	30	30
Link Distance (ft)	446	446	446	556	556	469	469	111	111	111	111
Travel Time (s)	6.8	6.8	6.8	8.4	8.4	10.7	10.7	2.5	2.5	2.5	2.5
Adj. Flow (vph)	1	1110	4	1	1159	2	14	0	3	1	0
Shared Lane Traffic (%)	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Lane Group Flow (vph)	1	1114	0	1	1161	0	17	0	17	0	1
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Right
Median Width (ft)	12	12	12	12	12	12	0	0	0	0	0
Link Offset (ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width (ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane	Yes			Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9	15	15	9	15	9
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop
Intersection Summary											
Area Type:	Other										
Control Type:	Unsignalized										
Intersection Capacity Utilization	39.5%										
Analysis Period (min)	15										
ICU Level of Service:	A										

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
5: Maple Road & Audubon Golf Club

4/24/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	1	1021	4	1	1066	2	13	0	3	1	0
Volume (veh/h)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	1110	4	1	1159	2	14	0	3	1	0
Pedestrians											
Lane Width (ft)											
Walking Speed (ft/s)											
Percent Blockage											
Right turn flare (veh)											
Median type											
Median storage (veh)											
Upstream signal (ft)											
pX, platoon unblocked											
vC, conflicting volume	1161		1114		1114		1696	2277	557	1722	2278
vC1, stage 1 conf vol							1114	1114	1162	1162	
vC2, stage 2 conf vol							582	1163	560	1116	
vCu, unblocked vol	1161		1114		1114		1696	2277	557	1722	2278
IC, single (s)	4.1		4.1		4.1		7.5	6.5	6.9	7.5	6.5
IC, 2 stage (s)							6.5	5.5	6.5	6.5	5.5
IF (s)	2.2		2.2		2.2		3.5	4.0	3.3	3.5	4.0
p0 queue free %	100		100		100		93	100	99	100	100
cM capacity (veh/h)	598		623		623		200	191	474	189	457
Direction, Lane #											
EB1	EB2	EB3	WB1	WB2	WB3	NB1	SB1				
1	740	374	1	772	388	17	1				
Volume Total	1	0	0	1	0	0	14				
Volume Left	0	0	4	0	0	2	3				
cSH	598	1700	1700	623	1700	1700	224	189			
Volume to Capacity	0.00	0.44	0.22	0.00	0.45	0.23	0.08	0.01			
Queue Length 95th (ft)	0	0	0	0	0	0	6	0			
Control Delay (s)	11.0	0.0	0.0	10.8	0.0	0.0	22.4	24.1			
Lane LOS	B			B			C	C			
Approach Delay (s)	0.0			0.0			22.4	24.1			
Approach LOS				C			C				
Intersection Summary											
Average Delay	0.2										
Intersection Capacity Utilization	39.5%										
ICU Level of Service	A										
Analysis Period (min)	15										

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
6: Maple Road & North Forest Road

4/24/2014

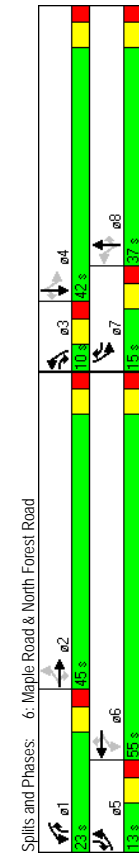
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	91	829	771	251	792	90	232	185	123	360	171
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1700
Ideal Flow (vphpl)	415	220	315	150	220	250	250	250	250	250	250
Storage Length (ft)	1	1	1	1	1	1	1	1	1	1	1
Storage Lanes	90	115	60	25	95	25	95	25	90	90	25
Taper Length (ft)	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor		0.850		0.850		0.850		0.850		0.850	0.850
Flt Protected	0.950		0.950		0.950		0.950		0.950		0.950
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1863	1583	1770	1863
Flt Permitted	0.268		0.102		0.210		0.352		0.352		0.352
Satd. Flow (perm)	499	3539	1583	190	3539	1583	391	1863	1583	656	1863
Right Turn on Red	Yes		Yes	No		Yes		Yes		Yes	Yes
Satd. Flow (RTOR)	86		86			56		56		87	87
Link Speed (mph)	45		45		45		35		35		35
Link Distance (ft)	1705		820		529		608		608		608
Travel Time (s)	25.8		12.4		10.3		11.8		11.8		11.8
Peak Hour Factor	0.90	0.90	0.90	0.95	0.95	0.90	0.90	0.90	0.90	0.80	0.80
Adj. Flow (vph)	101	921	86	264	834	95	100	258	206	154	450
Shared Lane Traffic (%)											
Lane Group Flow (vph)	101	921	86	264	834	95	100	258	206	154	450
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Median Width (ft)	12		12		12		12		12		12
Link Offset (ft)	0		0		0		0		0		0
Crosswalk Width (ft)	16		16		16		16		16		16
Two way Left Turn Lane	Yes		Yes		Yes		Yes		Yes		Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	2	1	2	1	2	1	1	2
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru
Leading Detector (ft)	20	100	20	100	20	100	20	100	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size (ft)	20	6	20	20	6	20	20	6	20	20	6
Detector 1 Type	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position (ft)	94		94		94		94		94		94
Detector 2 Size (ft)	6		6		6		6		6		6
Detector 2 Type	Ch+Ex		Ch+Ex		Ch+Ex		Ch+Ex		Ch+Ex		Ch+Ex
Detector 2 Channel											
Detector 2 Extend (s)	0.0		0.0		0.0		0.0		0.0		0.0
Turn Type	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+ov
Protected Phases	5	2	3	1	6	7	3	8	1	7	4
Permitted Phases	2	2	2	6	6	8	8	8	4	4	4
Detector Phase	5	2	3	1	6	7	3	8	1	7	4

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
6: Maple Road & North Forest Road

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase	1.0	4.0	1.0	1.0	4.0	1.0	1.0	4.0	1.0	1.0	4.0
Minimum Initial (s)	7.0	35.0	7.0	7.0	35.0	7.0	7.0	35.0	7.0	7.0	35.0
Minimum Split (s)	13.0	45.0	10.0	23.0	55.0	15.0	10.0	37.0	23.0	15.0	42.0
Total Split (s)	10.8%	37.5%	8.3%	19.2%	45.8%	12.5%	8.3%	30.8%	19.2%	12.5%	35.0%
Total Split (%)	7.0	39.0	4.0	17.0	49.0	9.0	4.0	31.0	17.0	9.0	36.0
Maximum Green (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Yellow Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Total Lost Time (s)	Lead/Lag	Lead	Lead	Lead	Lead	Lead	Lead	Lead	Lead	Lead	Lead
Lead/Lag	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Lead-Lag Optimize?	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Vehicle Extension (s)	None	None	None	None	None	None	None	None	None	None	None
Recall Mode	7.0		7.0		7.0		7.0		7.0		7.0
Walk Time (s)	22.0		22.0		22.0		22.0		22.0		22.0
Flash Dont Walk (s)	0		0		0		0		0		0
Pedestrian Calls (#/hr)	40.2	33.2	43.5	54.0	41.4	56.4	29.3	25.2	46.5	38.9	30.0
Act Effct Green (s)	0.38	0.31	0.41	0.50	0.39	0.51	0.27	0.24	0.43	0.36	0.28
Actuated g/C Ratio	0.37	0.84	0.12	0.83	0.61	0.11	0.62	0.59	0.29	0.47	0.86
v/c Ratio	19.9	42.9	5.2	48.0	28.7	13.9	46.2	43.3	15.5	29.2	54.6
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	19.9	42.9	5.2	48.0	28.7	13.9	46.2	43.3	15.5	29.2	54.6
Total Delay	B	D	A	D	C	B	D	D	B	C	D
LOS	37.9		31.8		33.7		39.4		39.4		39.4
Approach Delay	D		C		C		D		D		D
Approach LOS											
Intersection Summary	Other										
Area Type	Cycle Length: 120										
Actuated Cycle Length	Natural Cycle: 85										
Control Type	Maximum v/c Ratio: 0.86										
Intersection Signal Delay	Intersection Signal Delay: 35.6										
Intersection Capacity Utilization	ICU Level of Service D										
Analysis Period (min)	15										



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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
7: Sheridan Drive & Mill Street

4/24/2014

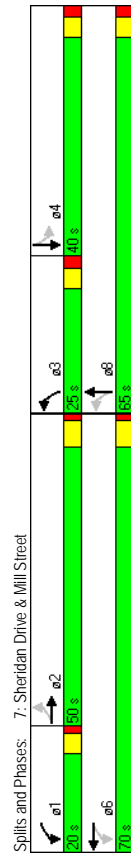
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	6	1313	125	220	1012	9	102	21	125	30	146
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	100	0	150	0	150	0	40	0	75	0	75
Storage Length (ft)	1	0	1	0	1	0	1	0	1	0	1
Storage Lanes	65	25	60	25	60	25	25	25	25	25	25
Taper Length (ft)	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.987		0.999		0.872		0.950		0.950		0.984
Flt Protected	0.950		0.950		0.950		0.950		0.950		0.950
Satd. Flow (prot)	1770	3493	0	1770	3536	0	1770	1624	0	1770	1833
Flt Permitted	0.241		0.080		0.235		0.235		0.598		0.598
Satd. Flow (perm)	449	3493	0	149	3536	0	438	1624	0	1114	1833
Right Turn on Red			No		Yes		Yes	No		No	Yes
Satd. Flow (RTOR)			1		1		1			4	
Link Speed (mph)	45		45		45		30		30		30
Link Distance (ft)	2782		977		838		362		362		82
Travel Time (s)	42.2		14.8		19.0		8.2		8.2		19.0
Peak Hour Factor	0.86	0.86	0.89	0.89	0.89	0.89	0.56	0.56	0.56	0.61	0.61
Adj. Flow (vph)	7	1527	145	247	1137	10	182	38	223	49	239
Shared Lane Traffic (%)											
Lane Group Flow (vph)	7	1672	0	247	1147	0	182	261	0	49	267
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Right	Right
Median Width(ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset(ft)	0		0		0		0		0		0
Crosswalk Width(ft)	16		16		16		16		16		16
Two way Left Turn Lane	Yes		Yes		Yes		Yes		Yes		Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9	15	9	15	9	15
Number of Detectors	1	2	1	2	1	2	1	2	1	2	1
Detector Template	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left
Leading Detector (ft)	20	100	20	100	20	100	20	100	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	6	20	6	20	6	20	6	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94	0.0	94	0.0	94	0.0	94	0.0	94	0.0	94
Detector 2 Size(ft)	6	6	6	6	6	6	6	6	6	6	6
Detector 2 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 2 Channel											
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm		pm+pt		pm+pt		pm+pt		Perm		Perm
Protected Phases	2	2	6	6	8	8	3	8	4	4	4
Permitted Phases	2	2	1	6	3	8	4	4	4	4	4
Detector Phase	2	2	1	6	3	8	4	4	4	4	4

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
7: Sheridan Drive & Mill Street

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase	4.0	4.0	1.0	4.0	4.0	1.0	4.0	4.0	4.0	4.0	4.0
Minimum Initial (s)	28.3	28.3	6.2	28.3	6.2	28.3	6.2	34.2	34.2	34.2	34.2
Minimum Split (s)	50.0	50.0	0.0	20.0	70.0	0.0	25.0	65.0	0.0	40.0	40.0
Total Split (s)	37.0%	37.0%	0.0%	14.8%	51.9%	0.0%	18.5%	48.1%	0.0%	29.6%	29.6%
Total Split (%)	44.5	44.5	15.7	64.5	19.8	59.8	34.8	34.8	34.8	34.8	34.8
Maximum Green (s)	4.3	4.3	3.2	4.3	3.2	4.3	3.2	3.2	3.2	3.2	3.2
Yellow Time (s)	1.2	1.2	1.1	1.2	1.1	1.2	2.0	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	5.5	5.5	4.0	4.3	5.5	4.0	5.2	5.2	4.0	5.2	5.2
Total Lost Time (s)	Lag	Lag	Lead	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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
Recall Mode	Max	Max	None	Max	None	Max	None	None	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0	15.0	15.0	15.0	15.0	22.0	22.0	22.0	22.0	22.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0	0	0	0
Act Effct Green (s)	45.4	45.4	66.1	64.9	41.3	41.3	41.3	41.3	22.0	22.0	22.0
Actuated g/C Ratio	0.39	0.39	0.56	0.55	0.35	0.35	0.35	0.35	0.19	0.19	0.19
v/c Ratio	0.04	1.23	0.84	0.58	0.58	0.46	0.58	0.46	0.23	0.77	0.77
Control Delay	28.2	144.4	53.9	20.1	34.2	31.3	34.2	31.3	43.2	59.4	59.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.2	144.4	53.9	20.1	34.2	31.3	34.2	31.3	43.2	59.4	59.4
LOS	C	F	D	C	C	C	C	C	C	D	E
Approach Delay	143.9	F	26.1	C	C	C	32.5	C	C	56.9	E
Approach LOS											
Intersection Summary											
Area Type:	Other										
Cycle Length:	135										
Actuated Cycle Length:	117										
Natural Cycle:	140										
Control Type:	Semi Act-Uncoordinated										
Maximum v/c Ratio:	1.23										
Intersection Signal Delay:	81.0										
Intersection Capacity Utilization:	83.7%										
Analysis Period (min):	15										



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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
8: Sheridan Drive & North Forest Road

4/24/2014

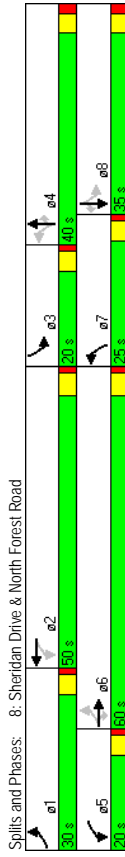
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	90	1311	209	181	1062	24	220	343	23	33	442
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	405	170	260	0	180	0	180	265	180	200	200
Storage Lanes	1	1	1	0	1	0	1	1	1	1	1
Taper Length (ft)	200	25	200	25	200	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95
Flt	0.850	0.850	0.997				0.850				0.850
Flt Protected	0.950			0.950			0.950				0.950
Satd. Flow (prot)	1770	3539	1583	1770	3529	0	1770	1863	1583	1770	3539
Flt Permitted	0.116			0.067			0.183				0.377
Satd. Flow (perm)	216	3539	1583	125	3529	0	341	1863	1583	702	3539
Right Turn on Red	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Satd. Flow (RTOR)	100			2			2		26		329
Link Speed (mph)	45			45			40		40		35
Link Distance (ft)	959			2219			547		547		354
Travel Time (s)	14.5			33.6			9.3		9.3		6.9
Peak Hour Factor	0.95	0.95	0.95	0.92	0.92	0.92	0.90	0.90	0.90	0.84	0.84
Adj. Flow (vph)	95	1380	220	197	1154	26	244	381	26	39	526
Shared Lane Traffic (%)											
Lane Group Flow (vph)	95	1380	220	197	1180	0	244	381	26	39	526
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Left	Right	Left	Right
Median Width (ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset (ft)	0			0			0		0		0
Crosswalk Width (ft)	16			16			16		16		16
Two way Left Turn Lane	Yes			Yes			Yes		Yes		Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	1	2	9	15	1	2	9	15
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru
Leading Detector (ft)	20	100	20	20	100	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size (ft)	20	6	20	20	6	20	6	20	20	6	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position (ft)	94			94			94		94		94
Detector 2 Size (ft)	6			6			6		6		6
Detector 2 Type	CI+EX			CI+EX			CI+EX		CI+EX		CI+EX
Detector 2 Channel											
Detector 2 Extend (s)	0.0			0.0			0.0		0.0		0.0
Turn Type	pm+pt	Perm	pm+pt	pm+pt	Perm	pm+pt	Perm	pm+pt	Perm	pm+pt	Perm
Protected Phases	1	6	5	2	7	4	3	8			
Permitted Phases	6	6	6	2	4	4	4	8	8	8	8
Detector Phase	1	6	6	5	2	7	4	4	4	3	8

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
8: Sheridan Drive & North Forest Road

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.3	27.9	27.9	8.3	27.9	8.3	27.9	27.9	27.9	8.3	27.9
Total Split (s)	30.0	60.0	60.0	20.0	50.0	0.0	25.0	40.0	40.0	20.0	35.0
Total Split (%)	21.4%	42.9%	42.9%	14.3%	35.7%	0.0%	17.9%	28.6%	28.6%	14.3%	25.0%
Maximum Green (s)	25.7	54.9	54.9	15.7	44.9		20.7	34.9	34.9	15.7	29.9
Yellow Time (s)	3.2	3.9	3.9	3.2	3.9		3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.1	1.2	1.1	1.2	1.1		1.1	1.1	1.1	1.1	1.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.3	5.1	5.1	4.3	5.1		4.3	5.1	5.1	4.3	5.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	None	Max	None		None	None	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0	15.0	15.0	15.0		15.0	15.0	15.0	15.0	15.0
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0	0	0	0
Act Effct Green (s)	65.1	55.2	55.2	73.9	60.0		49.2	38.9	38.9	33.8	25.7
Actuated g/C Ratio	0.49	0.42	0.42	0.56	0.45		0.37	0.29	0.29	0.26	0.19
v/c Ratio	0.44	0.93	0.31	0.81	0.74		0.75	0.69	0.05	0.16	0.76
Control Delay	22.1	50.1	16.1	57.2	34.3		45.0	49.9	12.3	28.9	58.7
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	22.1	50.1	16.1	57.2	34.3		45.0	49.9	12.3	28.9	58.7
LOS	C	D	B	E	C		D	D	B	C	E
Approach Delay	44.1			37.5			46.6				39.2
Approach LOS	D			D			D				D
Intersection Summary	Other										
Area Type:	Other										
Cycle Length:	140										
Actuated Cycle Length:	132.1										
Natural Cycle:	105										
Control Type:	Actuated-Uncoordinated										
Maximum v/c Ratio:	0.93										
Intersection Signal Delay:	41.5										
Intersection Capacity Utilization:	86.3%										
Analysis Period (min):	15										



Spills and Phases: 8: Sheridan Drive & North Forest Road

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
9: Proposed Access Road & North Forest Road

4/24/2014



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	4	27	5	442	731	7
Volume (vph)	1900	1900	1900	1900	1900	1900
Ideal Flow (vpph)	1.00	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.850				0.999	
Flt Protected	0.950			0.999		
Satd. Flow (prot)	1770	1583	0	1861	1861	0
Flt Permitted	0.950			0.999		
Satd. Flow (perm)	1770	1583	0	1861	1861	0
Link Speed (mph)	30			35	35	
Link Distance (ft)	265			310	169	
Travel Time (s)	6.0			6.0	3.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	29	5	480	795	8
Shared Lane Traffic (%)						
Lane Group Flow (vph)	4	29	0	485	803	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	15	15	9
Sign Control	Stop		Free	Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	48.9%					
Analysis Period (min)	15					
ICU Level of Service A						

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
9: Proposed Access Road & North Forest Road

4/24/2014



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	4	27	5	442	731	7
Volume (veh/h)	4	27	5	442	731	7
Sign Control	Stop		Free	Free	Free	
Grade	0%		0%	0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	29	5	480	795	8
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)				None	None	
Median type				None	None	
Median storage (veh)				664		
Upstream signal (ft)						
pX, platoon unblocked	0.82					
vC, conflicting volume	1290	798	802			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1243	798	802			
IC, single (s)	6.4	6.2	4.1			
IC, 2 stage (s)						
IF (s)	3.5	3.3	2.2			
p0 queue free %	97	92	99			
cM capacity (veh/h)	157	386	821			
Direction, Lane #						
	EB 1	EB 2	NB 1	SB 1		
Volume Total	4	29	486	802		
Volume Left	4	0	5	0		
Volume Right	0	29	0	8		
cSH	157	386	821	1700		
Volume to Capacity	0.03	0.08	0.01	0.47		
Queue Length 95th (ft)	2	6	0	0		
Control Delay (s)	28.6	15.1	0.2	0.0		
Lane LOS	D	C	A			
Approach Delay (s)	16.8		0.2	0.0		
Approach LOS	C					
Intersection Summary						
Average Delay	0.5					
Intersection Capacity Utilization	48.9%					
ICU Level of Service	A					
Analysis Period (min)	15					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
10: Sheridan Drive & Fenwick Road

4/24/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔↔	↔↔	↔↔	↔↔	↔↔
Volume (vph)	1651	6	4	1585	16	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	75	0	0	0	0
Storage Lanes	0	1	1	0	0	0
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Flt Protected	0.999		0.950	0.969		
Satd. Flow (prot)	3536	0	1770	3539	1717	0
Flt Permitted	0.950		0.950	0.969		
Satd. Flow (perm)	3536	0	1770	3539	1717	0
Link Speed (mph)	45		45	30		
Link Distance (ft)	635		229	278		
Travel Time (s)	9.6		3.5	6.3		
Peak Hour Factor	0.88	0.88	0.90	0.90	0.69	0.69
Adj. Flow (vph)	1876	7	4	1761	23	13
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1883	0	4	1761	36	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12		12	12		12
Link Offset(ft)	0		0	0		0
Crosswalk Width(ft)	16		16	16		16
Two way Left Turn Lane	Yes		Yes			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15	15	15	15	9
Sign Control	Free	Free	Free	Free	Stop	Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	55.8%					
Analysis Period (min)	15					
	ICU Level of Service: B					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
10: Sheridan Drive & Fenwick Road

4/24/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔↔	↔↔	↔↔	↔↔	↔↔
Volume (veh/h)	1651	6	4	1585	16	9
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%		0%	0%		0%
Peak Hour Factor	0.88	0.88	0.90	0.90	0.69	0.69
Hourly flow rate (vph)	1876	7	4	1761	23	13
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLT		TWLT			
Median storage (veh)	2		2			
Upstream signal (ft)	635					
pX, platoon unblocked		0.72		0.72		0.72
vC, conflicting volume		1883		2769		941
vC1, stage 1 conf vol				1880		
vC2, stage 2 conf vol				889		
vCu, unblocked vol		1452		2680		147
IC, single (s)		4.1		6.8		6.9
IC, 2 stage (s)				5.8		
IF (s)		2.2		3.5		3.3
p0 queue free %		99		81		98
cM capacity (veh/h)		333		119		630
Direction, Lane #						
	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	1251	632	4	881	881	36
Volume Left	0	0	4	0	0	23
Volume Right	0	7	0	0	0	13
cSH	1700	1700	333	1700	1700	168
Volume to Capacity	0.74	0.37	0.01	0.52	0.52	0.22
Queue Length 95th (ft)	0	0	1	0	0	20
Control Delay (s)	0.0	0.0	15.9	0.0	0.0	32.2
Lane LOS			C			D
Approach Delay (s)	0.0	0.0	0.0	0.0	0.0	32.2
Approach LOS						D
Intersection Summary						
Average Delay	0.3					
Intersection Capacity Utilization	55.8%					
Analysis Period (min)	15					
	ICU Level of Service: B					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
11: Sheridan Drive & Frankhauser Road

4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (vph)	51	1611	1577	24	45	48
Ideal Flow (vppf)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105	0	0	0	0	50
Storage Lanes	1	0	0	1	1	1
Taper Length (ft)	65	25	25	25	25	25
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Flt Protected	0.950	0.998			0.850	
Satd. Flow (prot)	1770	3539	3532	0	1770	1583
Flt Permitted	0.113				0.950	
Satd. Flow (perm)	210	3539	3532	0	1770	1583
Right Turn on Red		Yes			Yes	Yes
Satd. Flow (RTOR)		2			6	
Link Speed (mph)	45	45	45	30	30	30
Link Distance (ft)	101.4	635	825	18.8	18.8	18.8
Travel Time (s)	15.4	9.6	9.6	18.8	18.8	18.8
Peak Hour Factor	0.89	0.89	0.94	0.94	0.73	0.73
Adj. Flow (vph)	57	1810	1678	26	62	66
Shared Lane Traffic (%)						
Lane Group Flow (vph)	57	1810	1704	0	62	66
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Right
Median Width(ft)	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	2	2	9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Left	Right	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94	94	94	6	6	6
Detector 2 Size(ft)	6	6	6	6	6	6
Detector 2 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 2 Channel						
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm				Perm	Perm
Protected Phases	2	2	6	4	4	4
Permitted Phases	2	2	6	4	4	4
Detector Phase	2	2	6	4	4	4

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
11: Sheridan Drive & Frankhauser Road

4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	1.0	1.0
Minimum Split (s)	40.0	40.0	40.0	40.0	31.1	31.1
Total Split (s)	40.0	40.0	40.0	40.0	40.0	40.0
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Maximum Green (s)	35.2	35.2	35.2	35.2	34.9	34.9
Yellow Time (s)	3.9	3.9	3.9	3.9	3.2	3.2
All-Red Time (s)	0.9	0.9	0.9	0.9	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.8	4.8	4.8	4.8	5.1	5.1
LeadLag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0	15.0	15.0	19.0	19.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effct Green (s)	64.6	64.6	64.6	64.6	8.6	8.6
Actuated g/C Ratio	0.81	0.81	0.81	0.81	0.11	0.11
v/c Ratio	0.34	0.63	0.60	0.33	0.38	0.38
Control Delay	10.2	5.6	5.2	5.2	36.7	36.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.2	5.6	5.2	5.2	36.7	36.2
LOS	B	A	A	A	D	D
Approach Delay		5.7	5.2	5.2	36.4	
Approach LOS		A	A	A	D	
Intersection Summary						
Area Type:	Other					
Cycle Length:	80					
Actuated Cycle Length:	80					
Offset:	76 (95%), Referenced to phase 2:EBTL and 6:WBT, Start of Green					
Natural Cycle:	80					
Control Type:	Actuated-Coordinated					
Maximum v/c Ratio:	0.63					
Intersection Signal Delay:	6.5					
Intersection Capacity Utilization:	56.1%					
Analysis Period (min):	15					
Spills and Phases:	11: Sheridan Drive & Frankhauser Road					
	↔	↔	↔	↔	↔	↔
	40 s	40 s	40 s	40 s	40 s	40 s

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
12: Sheridan Drive & I-290 NB

4/24/2014

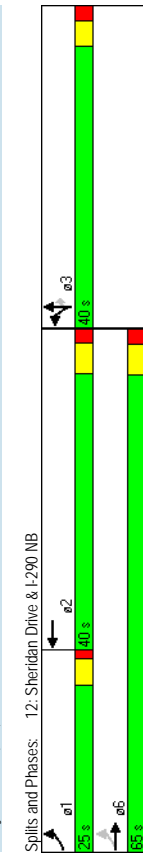
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	249	1465	0	0	1064	517	269	0	233	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	0	0	0	230	0	0	0	0	0
Storage Lanes	1	0	0	0	0	1	0	0	0	0	0
Taper Length (ft)	105	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	0.95	0.91	0.95	1.00	1.00
Flt Protected	0.950				0.951		0.934	0.850			
Satd. Flow (prot)	1770	5085	0	0	4836	0	1681	1540	1504	0	0
Flt Permitted	0.085				0.950	0.973					
Satd. Flow (perm)	158	5085	0	0	4836	0	1681	1540	1504	0	0
Right Turn on Red		Yes			Yes				Yes		Yes
Satd. Flow (RTOR)		124			124		25	25	25		30
Link Speed (mph)	45	45			45		30	30	30		30
Link Distance (ft)	197	193			193		830	830	830		423
Travel Time (s)	3.0	2.9			2.9		18.9	18.9	18.9		9.6
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.88	0.88	0.88	0.88	0.92	0.92
Adj. Flow (vph)	245	1559	0	0	1132	550	306	0	265	0	0
Shared Lane Traffic (%)						35%		32%			
Lane Group Flow (vph)	265	1559	0	0	1682	0	199	192	180	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Right
Median Width(ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane											
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	15	9	15	15	15	9	15	9
Number of Detectors	1	2			2		1	2	1		1
Detector Template	Left	Thru			Thru		Left	Thru	Right		Right
Leading Detector (ft)	20	100			100		20	100	20		20
Trailing Detector (ft)	0	0			0		0	0	0		0
Detector 1 Position(ft)	0	0			0		0	0	0		0
Detector 1 Size(ft)	20	6			6		20	6	20		20
Detector 1 Type	CI+EX	CI+EX			CI+EX		CI+EX	CI+EX	CI+EX		CI+EX
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0	0.0		0.0
Detector 2 Position(ft)	94				94		94		94		94
Detector 2 Size(ft)	6				6		6		6		6
Detector 2 Type	CI+EX				CI+EX		CI+EX		CI+EX		CI+EX
Detector 2 Channel											
Detector 2 Extend (s)	0.0	0.0			0.0		0.0	0.0	0.0		0.0
Turn Type	pn+pt				custom		custom		Perm		Perm
Protected Phases	1	6			2		3	3	3		3
Permitted Phases	6				3		3	3	3		3
Detector Phase	1	6			2		3	3	3		3

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
12: Sheridan Drive & I-290 NB

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	1.0	4.0			4.0		4.0	4.0	4.0		4.0
Minimum Split (s)	6.2	33.9			27.8		29.0	29.0	29.0		29.0
Total Split (s)	25.0	65.0	0.0	0.0	40.0	0.0	40.0	40.0	40.0	0.0	40.0
Total Split (%)	23.8%	61.9%	0.0%	0.0%	38.1%	0.0%	38.1%	38.1%	38.1%	0.0%	38.1%
Maximum Green (s)	20.7	59.1			34.2		34.8	34.8	34.8		34.8
Yellow Time (s)	3.2	3.9			3.9		3.2	3.2	3.2		3.2
All-Red Time (s)	1.1	2.0			1.9		2.0	2.0	2.0		2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.3	5.9	4.0	4.0	5.8	4.0	5.2	5.2	5.2	4.0	4.0
Lead/Lag	Lead	Lag			Lag						
Vehicle Extension (s)	2.0	3.0			3.0		2.0	2.0	2.0		2.0
Recall Mode	None	C-Max			C-Max		None	None	None		None
Walk Time (s)	7.0				7.0						
Flash Dont Walk (s)	21.0				15.0						
Pedestrian Calls (#/hr)	0				0						
Act Effct Green (s)	78.0	76.4			58.7		17.5	17.5	17.5		17.5
Actuated g/C Ratio	0.74	0.73			0.56		0.17	0.17	0.17		0.17
v/c Ratio	0.81	0.42			0.61		0.71	0.69	0.66		0.66
Control Delay	39.9	6.6			17.4		54.7	48.1	46.2		46.2
Queue Delay	0.0	0.0			0.0		0.0	0.0	0.0		0.0
Total Delay	39.9	6.6			17.4		54.7	48.1	46.2		46.2
LOS	D	A			B		D	D	D		D
Approach Delay	11.4				17.4						
Approach LOS	B				B						



Lanes, Volumes, Timings
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
13: Sheridan Drive & Harlem Road

4/24/2014

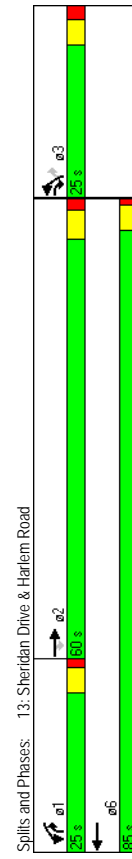
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔↔	↔↔	↔↔	↔↔	↔↔
Volume (vph)	865	315	487	846	285	849
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	215	0	140	0	0
Storage Lanes	1	1	1	2	2	2
Taper Length (ft)	230	100	100	100	25	25
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	0.88
Flt Protected		0.850				0.850
Satd. Flow (prot)	3539	1583	3433	3539	3433	2787
Flt Permitted		0.950				0.950
Satd. Flow (perm)	3539	1583	3433	3539	3433	2787
Right Turn on Red	No					Yes
Satd. Flow (RTOR)						124
Link Speed (mph)	45		45		35	
Link Distance (ft)	314		413		338	
Travel Time (s)	4.8		6.3		6.6	
Peak Hour Factor	0.85	0.85	0.92	0.92	0.90	0.90
Adj. Flow (vph)	1018	371	529	920	317	943
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1018	371	529	920	317	943
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Right	Right
Median Width(ft)	12	24	24	24	24	24
Link Offset(ft)	0	0	0	0	0	0
Crosswalk Width(ft)	16		16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15	15	15	15	9
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (ft)	100	20	20	100	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	6	20	20	6	20	20
Detector 1 Type	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94					
Detector 2 Size(ft)	6					
Detector 2 Type	Ch+Ex					
Detector 2 Channel						
Detector 2 Extend (s)	0.0					
Turn Type		pm+ov	Prot			pm+ov
Protected Phases	2	3	1	6	3	1
Permitted Phases	2	3	1	6	3	1
Detector Phase	2	3	1	6	3	1

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
13: Sheridan Drive & Harlem Road

4/24/2014

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Switch Phase	→	↔	↔	↔	↔	↔
Minimum Initial (s)	1.0	1.0	1.0	4.0	1.0	1.0
Minimum Split (s)	30.5	6.2	5.3	32.3	6.2	5.3
Total Split (s)	60.0	25.0	25.0	85.0	25.0	25.0
Total Split (%)	54.5%	22.7%	22.7%	77.3%	22.7%	22.7%
Maximum Green (s)	54.5	19.8	20.7	80.7	19.8	20.7
Yellow Time (s)	3.9	3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.6	2.0	1.1	1.1	2.0	1.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.2	4.3	4.3	5.2	4.3
Lead/Lag	Lag	Lead	Lead	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	C-Max	None	None	None	None	None
Walk Time (s)	7.0		7.0			
Flash Dont Walk (s)	18.0		21.0			
Pedestrian Calls (#/hr)	0		0			
Act Effct Green (s)	58.7	78.7	21.8	86.0	14.5	41.5
Actuated g/C Ratio	0.53	0.72	0.20	0.78	0.13	0.38
v/c Ratio	0.54	0.33	0.78	0.33	0.70	0.84
Control Delay	18.8	6.9	50.4	4.1	54.1	34.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.8	6.9	50.4	4.1	54.1	34.0
LOS	B	A	D	A	D	C
Approach Delay	15.7			21.0		39.0
Approach LOS	B			C		D



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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
14: I-290 SB & Harlem Road

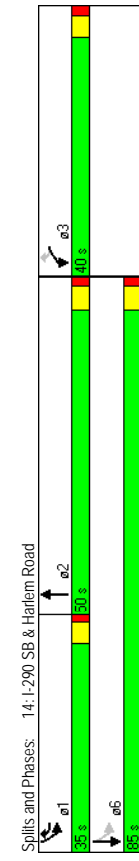
4/24/2014

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (vph)	298	712	462	21	391	379
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	0	0	330	0
Storage Lanes	1	1	0	0	1	0
Taper Length (ft)	25	25	25	25	75	25
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	3518	0	1770	3539
Flt Permitted	0.950				0.247	
Satd. Flow (perm)	1770	1583	3518	0	460	3539
Right Turn on Red	Yes	Yes	Yes	Yes	Yes	Yes
Satd. Flow (RTOR)	157	4				
Link Speed (mph)	30	35	35	35	35	35
Link Distance (ft)	333	250	456	456	456	456
Travel Time (s)	7.6	4.9	8.9	8.9	8.9	8.9
Peak Hour Factor	0.81	0.81	0.87	0.87	0.88	0.88
Adj. Flow (vph)	368	879	531	24	444	431
Shared Lane Traffic (%)						
Lane Group Flow (vph)	368	879	555	0	444	431
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	9	9	15	15
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Left	Thru	Thru
Leading Detector (ft)	20	20	100	20	100	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	6	6
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	0.0	0.0	94	94	94	94
Detector 2 Size(ft)	6	6	6	6	6	6
Detector 2 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 2 Channel						
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	pm+ov				pm+pl	
Protected Phases	3	1	2	1	1	6
Permitted Phases	3	1	2	1	6	6
Detector Phase	3	1	2	1	6	6

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
14: I-290 SB & Harlem Road

4/24/2014

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Switch Phase	↔	↔	↔	↔	↔	↔
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	9.2	30.6	9.2	21.0	21.0
Total Split (s)	40.0	35.0	50.0	0.0	35.0	85.0
Total Split (%)	32.0%	28.0%	40.0%	0.0%	28.0%	68.0%
Maximum Green (s)	35.2	30.7	45.0	30.7	80.0	80.0
Yellow Time (s)	3.2	3.2	3.6	3.2	3.6	3.6
All-Red Time (s)	1.6	1.1	1.4	1.1	1.4	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.8	4.3	5.0	4.0	4.3	5.0
Lead/Lag	Lead	Lead	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Min	None	None	None
Walk Time (s)	10.0					
Flash Dont Walk (s)	15.0					
Pedestrian Calls (#/hr)	0					
Act Effct Green (s)	23.2	51.5	20.1	48.6	47.8	47.8
Actuated g/C Ratio	0.28	0.63	0.25	0.60	0.59	0.59
v/c Ratio	0.73	0.83	0.64	0.69	0.21	0.21
Control Delay	37.4	18.1	32.6	17.9	8.7	8.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.4	18.1	32.6	17.9	8.7	8.7
LOS	D	B	C	B	A	A
Approach Delay	23.8	32.6	32.6	32.6	13.3	13.3
Approach LOS	C	C	C	C	B	B
Intersection Summary						
Area Type:	Other					
Cycle Length:	125					
Actuated Cycle Length:	81.5					
Natural Cycle:	90					
Control Type:	Actuated-Uncoordinated					
Maximum v/c Ratio:	0.83					
Intersection Signal Delay:	22.2					
Intersection Capacity Utilization:	65.3%					
Analysis Period (min):	15					



Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
15: Maple Road & Proposed North Driveway 4/24/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔	↔↔	↔↔	↔	↔
Volume (vph)	977	36	53	1007	70	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	2.25	0	0	150	0
Storage Lanes	0	1	1	1	1	1
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Flt Protected	0.995		0.950		0.950	0.850
Satd. Flow (prot)	3522	0	1770	3539	1770	1583
Flt Permitted	0.950		0.950		0.950	
Satd. Flow (perm)	3522	0	1770	3539	1770	1583
Link Speed (mph)	45		45		30	
Link Distance (ft)	1002		926		372	
Travel Time (s)	15.2		14.0		8.5	
Adj. Flow (vph)	1062	39	58	1095	76	58
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1101	0	58	1095	76	58
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12		12		12	
Link Offset(ft)	0		0		0	
Crosswalk Width(ft)	16		16		16	
Two way Left Turn Lane	Yes		Yes		Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15	15	15	15	9
Sign Control	Free	Free	Free	Free	Stop	Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	45.4%					
Analysis Period (min)	15					
ICU Level of Service: A						

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
15: Maple Road & Proposed North Driveway 4/24/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔	↔↔	↔↔	↔	↔
Volume (veh/h)	977	36	53	1007	70	53
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%		0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1062	39	58	1095	76	58
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						6
Median type			TW/TL			
Median storage (veh)	2			2		
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			1101		1744	551
vC1, stage 1 conf vol					1082	
vC2, stage 2 conf vol					662	
vCu, unblocked vol			1101		1744	551
IC, single (s)			4.1		6.8	6.9
IC, 2 stage (s)					5.8	
IF (s)			2.2		3.5	3.3
p0 queue free %			91		68	88
cM capacity (veh/h)			630		241	478
Direction, Lane #						
	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	708	393	58	547	547	134
Volume Left	0	0	58	0	0	76
Volume Right	0	39	0	0	0	58
cSH	1700	1700	630	1700	1700	424
Volume to Capacity	0.42	0.23	0.09	0.32	0.32	0.32
Queue Length 95th (ft)	0	0	8	0	0	33
Control Delay (s)	0.0	0.0	11.3	0.0	0.0	21.0
Lane LOS			B			C
Approach Delay (s)	0.0	0.6				21.0
Approach LOS						C
Intersection Summary						
Average Delay	1.4					
Intersection Capacity Utilization	45.4%					
Analysis Period (min)	15					
ICU Level of Service: A						

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
16: Sheridan Drive & Proposed Access Driveway

4/24/2014

	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group						
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (vph)	12	1603	1530	36	7	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	0	0	0	0	0
Storage Lanes	1	0	1	0	1	0
Taper Length (ft)	25	0.95	0.95	0.95	1.00	1.00
Lane Util. Factor	1.00	0.997	0.983	0.983	0.983	0.983
Flt Protected	0.950					
Satd. Flow (prot)	1770	3539	3529	0	1670	0
Flt Permitted	0.950					
Satd. Flow (perm)	1770	3539	3529	0	1670	0
Link Speed (mph)	45	45	45	30	30	30
Link Distance (ft)	480	989	989	390	390	390
Travel Time (s)	7.3	14.5	14.5	8.9	8.9	8.9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	13	1742	1663	39	8	15
Shared Lane Traffic (%)						
Lane Group Flow (vph)	13	1742	1702	0	23	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right
Median Width(ft)	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	Free	Free	Free	Free	Free
Sign Control	15	Free	Free	Free	Stop	Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	54.3%					
Analysis Period (min)	15					
ICU Level of Service:	A					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
16: Sheridan Drive & Proposed Access Driveway

4/24/2014

	EBL	EBT	WBT	WBR	SBL	SBR
Movement	↔	↔	↔	↔	↔	↔
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (veh/h)	12	1603	1530	36	7	14
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	13	1742	1663	39	8	15
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLT	TWLT	TWLT	TWLT	TWLT	TWLT
Median storage (veh)	2	2	2	2	2	2
Upstream signal (ft)		959				
pX, platoon unblocked	0.72				0.72	0.72
vC, conflicting volume	1702				2580	851
vC1, stage 1 conf vol					1683	
vC2, stage 2 conf vol					897	
vCu, unblocked vol	1204				2419	27
IC, single (s)	4.1				6.8	6.9
IC, 2 stage (s)					5.8	
IF (s)	2.2				3.5	3.3
p0 queue free %	97				95	98
cM capacity (veh/h)	416				157	753
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	13	871	871	1109	593	23
Volume Left	13	0	0	0	0	8
Volume Right	0	0	0	0	39	15
cSH	416	1700	1700	1700	1700	332
Volume to Capacity	0.03	0.51	0.51	0.65	0.35	0.07
Queue Length 95th (ft)	2	0	0	0	0	6
Control Delay (s)	13.9	0.0	0.0	0.0	0.0	16.6
Lane LOS	B					C
Approach Delay (s)	0.1			0.0		16.6
Approach LOS				C		C
Intersection Summary						
Average Delay	0.2					
Intersection Capacity Utilization	54.3%					
ICU Level of Service	A					
Analysis Period (min)	15					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
17: Proposed Access Road & Frankhauser Road

4/24/2014

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Volume (veh/h)	27	0	50	25	0	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fit	0.950					
Fit Protected	0.950					
Satd. Flow (prot)	1770	0	1779	0	0	1863
Fit Permitted	0.950					
Satd. Flow (perm)	1770	0	1779	0	0	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	200		825			244
Travel Time (s)	4.5		18.8			5.5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	29	0	54	27	0	73
Shared Lane Traffic (%)						
Lane Group Flow (vph)	29	0	81	0	0	73
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	9	9	15	15
Sign Control	Stop	Free	Free	Free	Free	Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	14.2%					
Analysis Period (min)	15					
ICU Level of Service	A					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
17: Proposed Access Road & Frankhauser Road

4/24/2014

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Volume (veh/h)	27	0	50	25	0	67
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	29	0	54	27	0	73
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)			825			
pX, platoon unblocked						
vC, conflicting volume	141	68				82
vC1, stage 1 cont vol						
vC2, stage 2 cont vol	141	68				82
vCu, unblocked vol	6.4	6.2				4.1
IC, single (s)						
IC, 2 stage (s)						
IF (s)	3.5	3.3				2.2
p0 queue free %	97	100				100
cM capacity (veh/h)	852	995				1516
Direction, Lane #						
	WB 1	NB 1	SB 1			
Volume Total	29	82	73			
Volume Left	29	0	0			
Volume Right	0	27	0			
cSH	852	1700	1516			
Volume to Capacity	0.03	0.05	0.00			
Queue Length 95th (ft)	3	0	0			
Control Delay (s)	9.4	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	9.4	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay	1.5					
Intersection Capacity Utilization	14.2%					
ICU Level of Service	A					
Analysis Period (min)	15					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
52: Sheridan Drive & Proposed Access Driveway

4/24/2014

	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (vph)	68	1592	1518	26	23	70
Ideal Flow (vpph)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75	0	0	0	0	0
Storage Lanes	1	0	0	1	1	1
Taper Length (ft)	25	0.95	0.95	0.95	1.00	1.00
Lane Util. Factor	1.00	0.997	0.997	0.950	0.850	0.850
Flt Protected	0.950			0.950		
Satd. Flow (prot)	1770	3539	3529	0	1770	1583
Flt Permitted	0.950			0.950		
Satd. Flow (perm)	1770	3539	3529	0	1770	1583
Link Speed (mph)	45	45	45	30	30	30
Link Distance (ft)	229	480	480	432	432	432
Travel Time (s)	3.5	7.3	7.3	9.8	9.8	9.8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	74	1730	1650	28	25	76
Shared Lane Traffic (%)						
Lane Group Flow (vph)	74	1730	1678	0	25	76
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Right	Left	Right
Median Width (ft)	12	12	12	12	12	12
Link Offset (ft)	0	0	0	0	0	0
Crosswalk Width (ft)	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	Free	Free	Free	Free	Stop
Sign Control	Free	Free	Free	Free	Stop	Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	59.9%					
Analysis Period (min)	15					
ICU Level of Service:	B					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
52: Sheridan Drive & Proposed Access Driveway

4/24/2014

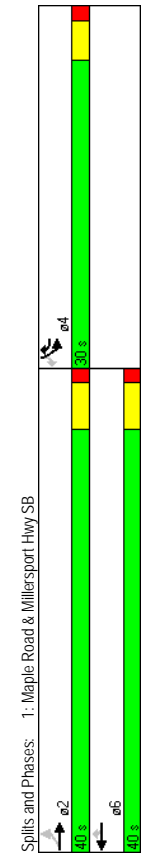
	EBL	EBT	WBT	WBR	SBL	SBR
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (veh/h)	68	1592	1518	26	23	70
Sign Control	Free	Free	Free	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	74	1730	1650	28	25	76
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLT	TWLT	TWLT	TWLT	TWLT	TWLT
Median storage (veh)	2	2	2	2	2	2
Upstream signal (ft)	864	864	864	864	864	864
pX, platoon unblocked						0.75
vC, conflicting volume	1678	1678	1678	2677	839	839
vC1, stage 1 conf vol				1664		
vC2, stage 2 conf vol				1013		
vCu, unblocked vol	1678	1678	1678	2568	839	839
IC, single (s)	4.1	4.1	4.1	6.8	6.9	6.9
IC, 2 stage (s)				5.8		
IF (s)	2.2	2.2	2.2	3.5	3.3	3.3
p0 queue free %	80	80	80	80	75	75
cM capacity (veh/h)	378	378	378	127	309	309
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1 SB 2
Volume Total	74	865	865	1100	578	25 76
Volume Left	74	0	0	0	0	25 0
Volume Right	0	0	0	0	28	0 76
cSH	378	1700	1700	1700	1700	127 309
Volume to Capacity	0.20	0.51	0.51	0.65	0.34	0.20 0.25
Queue Length 95th (ft)	18	0	0	0	0	17 24
Control Delay (s)	16.8	0.0	0.0	0.0	0.0	40.0 20.4
Lane LOS	C	C	C	C	E	E C
Approach Delay (s)	0.7	0.7	0.7	0.0	25.3	D
Approach LOS						
Intersection Summary						
Average Delay	1.1					
Intersection Capacity Utilization	59.9%					
Analysis Period (min)	15					
ICU Level of Service	B					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
 1: Maple Road & Millersport Hwy SB
 4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (vph)	29	1078	940	231	67	174
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150			150	0	0
Storage Lanes	1			1	1	1
Taper Length (ft)	35			100	25	25
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Flt Protected	0.950			0.850	0.950	
Satd. Flow (prot)	1770	3539	3539	1583	1770	1583
Flt Permitted	0.256			0.950		
Satd. Flow (perm)	477	3539	3539	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)		45	45		30	71
Link Speed (mph)		555	654		281	
Link Distance (ft)		8.4	9.9		6.4	
Travel Time (s)		0.90	0.92	0.92	0.81	0.81
Peak Hour Factor		32	1198	1022	251	83
Adj. Flow (vph)		32	1198	1022	251	83
Shared Lane Traffic (%)						
Lane Group Flow (vph)	No	No	No	No	No	No
Enter Blocked Intersection	Left	Left	Right	Left	Right	Right
Lane Alignment	Left	Left	Right	Left	Right	Right
Median Width(ft)		12	12	12	12	
Link Offset(ft)		0	0	0	0	
Crosswalk Width(ft)		16	16	16	16	
Two way Left Turn Lane		Yes				
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94	94	94			
Detector 2 Size(ft)	6	6	6			
Detector 2 Type	CI+EX	CI+EX	CI+EX			
Detector 2 Channel						
Detector 2 Extend (s)	0.0	0.0	0.0			
Turn Type	Perm			pm+ov		Perm
Protected Phases	2	6	6	4	4	
Permitted Phases	2	2	6	4	4	4
Detector Phase	2	2	6	4	4	4

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
 1: Maple Road & Millersport Hwy SB
 4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	1.0	1.0	1.0
Minimum Split (s)	9.1	9.1	9.1	6.2	6.2	6.2
Total Split (s)	40.0	40.0	40.0	30.0	30.0	30.0
Total Split (%)	57.1%	57.1%	57.1%	42.9%	42.9%	42.9%
Maximum Green (s)	34.9	34.9	34.9	25.4	25.4	25.4
Yellow Time (s)	3.9	3.9	3.9	3.2	3.2	3.2
All-Red Time (s)	1.2	1.2	1.2	1.4	1.4	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	4.6	4.6	4.6
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Min	C-Min	C-Min	None	None	None
Act Effct Green (s)	48.1	48.1	48.1	7.00	12.2	12.2
Actuated g/C Ratio	0.69	0.69	0.69	1.00	0.17	0.17
v/c Ratio	0.10	0.49	0.42	0.16	0.27	0.64
Control Delay	6.1	6.8	8.0	0.2	25.2	25.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.1	6.8	8.0	0.2	25.2	25.9
LOS	A	A	A	A	C	C
Approach Delay		6.8	6.5			
Approach LOS		A	A		C	C
Intersection Summary						
Area Type:	Other					
Cycle Length:	70					
Offset:	5 (7%), Referenced to phase 2:EBTL and 6:WBT. Start of Green					
Natural Cycle:	40					
Control Type:	Actuated-Coordinated					
Maximum v/c Ratio:	0.64					
Intersection Signal Delay:	8.7					
Intersection LOS:	A					
Intersection Capacity Utilization:	44.8%					
Analysis Period (min):	15					



Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
 2: Maple Road & Millersport Hwy NB

4/24/2014

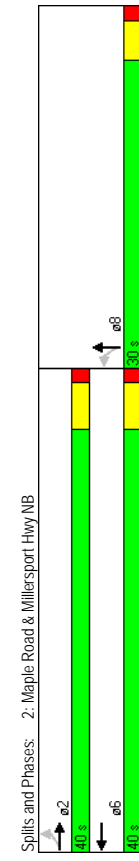
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	97	1048	0	0	1079	41	91	0	469	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	0	0	0	0	0	0	0	0	0
Storage Lanes	1	0	0	0	0	1	0	0	0	0	0
Taper Length (ft)	50	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.950				0.995		0.950		0.850		
Satd. Flow (prot)	1770	3539	0	0	3522	0	1770	1583	0	0	0
Flt Permitted	0.120						0.950				
Satd. Flow (perm)	224	3539	0	0	3522	0	1770	1583	0	0	0
Right Turn on Red			Yes		Yes		Yes	Yes			Yes
Satd. Flow (RTOR)			8		8		49	49			30
Link Speed (mph)	45		45		45		30	30			263
Link Distance (ft)	654		1770		1770		319	319			6.0
Travel Time (s)	9.9		26.8		26.8		7.3	7.3			6.0
Peak Hour Factor	0.91	0.91	0.87	0.87	0.87	0.84	0.84	0.84	0.84	0.92	0.92
Adj. Flow (vph)	107	1152	0	0	1240	47	108	0	558	0	0
Shared Lane Traffic (%)											
Lane Group Flow (vph)	107	1152	0	0	1287	0	108	558	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9	15	9	15	9	15
Number of Detectors	1	2	2	2	2	2	1	2	2	2	2
Detector Template	Left	Thru	Thru	Left	Thru	Thru	Left	Thru	Left	Thru	Thru
Leading Detector (ft)	20	100	100	100	100	20	100	100	100	100	100
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	6	6	20	6	6	6	6	6
Detector 1 Type	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94			94				
Detector 2 Size(ft)	6			6			6				
Detector 2 Type	Ch+Ex			Ch+Ex			Ch+Ex				
Detector 2 Channel											
Detector 2 Extend (s)	0.0			0.0			0.0				
Turn Type	Perm			Perm			Perm				
Protected Phases	2			6			8				
Permitted Phases	2			6			8				
Detector Phase	2			6			8				

Lanes, Volumes, Timings
 SRF & Associates
 Alternative 3
 Page 3

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
 2: Maple Road & Millersport Hwy NB

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	1.0	1.0	1.0	4.0	4.0	4.0	1.0	1.0	1.0	1.0	1.0
Minimum Split (s)	6.1	6.1	6.1	9.1	9.1	9.1	6.2	6.2	6.2	6.2	6.2
Total Split (s)	40.0	40.0	40.0	0.0	0.0	0.0	30.0	30.0	30.0	0.0	0.0
Total Split (%)	57.1%	57.1%	57.1%	0.0%	0.0%	0.0%	42.9%	42.9%	42.9%	0.0%	0.0%
Maximum Green (s)	34.9	34.9	34.9	34.9	34.9	34.9	25.4	25.4	25.4	25.4	25.4
Yellow Time (s)	3.9	3.9	3.9	3.9	3.9	3.9	3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.2	1.2	1.2	1.2	1.2	1.2	1.4	1.4	1.4	1.4	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	4.0	4.0	4.0	4.6	4.6	4.6	4.0	4.0
Lead-Lag											
Lead-Lag Optimize?											
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	None	None	None	None	None
Recall Mode	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min	None	None	None	None	None
Act Effct Green (s)	35.6	35.6	35.6	35.6	35.6	35.6	24.7	24.7	24.7	24.7	24.7
Actuated g/C Ratio	0.51	0.51	0.51	0.51	0.51	0.51	0.35	0.35	0.35	0.35	0.35
v/c Ratio	0.94	0.64	0.64	0.72	0.72	0.72	0.17	0.17	0.17	0.17	0.17
Control Delay	88.6	12.2	12.2	16.3	16.3	16.3	16.2	16.2	16.2	47.8	47.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	88.6	12.2	12.2	16.3	16.3	16.3	16.2	16.2	16.2	47.8	47.8
LOS	F	B	B	B	B	B	B	B	B	D	D
Approach Delay	18.7			16.3			16.3			42.7	
Approach LOS	B			B			B			D	
Intersection Summary											
Area Type:	Other										
Cycle Length:	70										
Actuated Cycle Length:	70										
Offset:	5 (7%), Referenced to phase 2:EBTL and 6:WBT, Start of Green										
Natural Cycle:	50										
Control Type:	Actuated-Coordinated										
Maximum v/c Ratio:	0.94										
Intersection Signal Delay:	22.7										
Intersection LOS:	C										
Intersection Capacity Utilization:	77.9%										
Analysis Period (min):	15										



Splits and Phases: 2: Maple Road & Millersport Hwy NB

Lanes, Volumes, Timings
 SRF & Associates
 Alternative 3
 Page 4

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
3: Maple Road & Maplemere Road

4/24/2014

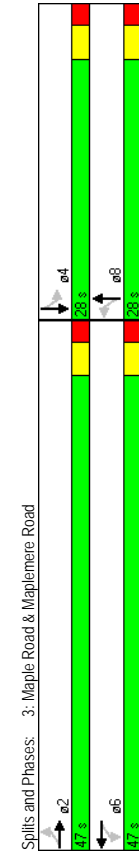
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	36	1379	35	21	1010	62	22	0	12	77	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	70	0	0	0	0	0	0	0	0
Storage Lanes	1	0	1	0	0	0	0	0	0	0	0
Taper Length (ft)	50	25	50	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Flt	0.996	0.950	0.991				0.952		0.969	0.964	0.968
Flt Protected	0.950	1770	3525	0	1770	3507	0	1718	0	0	1738
Satd. Flow (prot)	0.192	0.126	0.126				0.782		0.782	0.767	0.767
Flt Permitted	358	3525	0	235	3507	0	0	1387	0	0	1377
Right Turn on Red											
Satd. Flow (RTOR)	5	13	13	45	45	45	30	30	30	25	25
Link Speed (mph)	45	1770	1106	378	378	402	91	91	91	91	91
Link Distance (ft)	26.8	16.8	16.8	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6
Travel Time (s)	0.94	0.94	0.87	0.87	0.87	0.87	0.62	0.62	0.62	0.81	0.81
Peak Hour Factor	38	1467	37	24	1161	71	35	0	19	95	10
Adj. Flow (vph)	38	1504	0	24	1232	0	0	54	0	0	143
Lane Group Flow (vph)	No	No	No	No	No	No	No	No	No	No	No
Enter Blocked Intersection	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	12	0	0	12	0	0	0	0	0	0	0
Link Offset(ft)	16	0	0	16	0	0	16	0	0	0	16
Crosswalk Width(ft)	16	0	0	16	0	0	16	0	0	0	16
Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9	15	9	15	15	9
Number of Detectors	1	2	1	2	1	2	1	2	1	1	2
Detector Template	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Thru
Leading Detector (ft)	20	100	20	100	20	100	20	100	20	100	100
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	6	20	6	20	6	20	6	6
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94	94	94	94	94	94	94	94	94	94	94
Detector 2 Size(ft)	6	6	6	6	6	6	6	6	6	6	6
Detector 2 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 2 Channel											
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm
Protected Phases	2	2	6	6	8	8	8	8	8	4	4
Permitted Phases	2	2	6	6	6	6	8	8	8	4	4
Detector Phase	2	2	6	6	6	6	8	8	8	4	4

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
3: Maple Road & Maplemere Road

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	9.0	9.0	9.0	9.0	9.0	27.0	27.0	27.0	27.0	27.0
Total Split (s)	47.0	47.0	0.0	47.0	47.0	0.0	28.0	28.0	0.0	28.0	28.0
Total Split (%)	62.7%	62.7%	0.0%	62.7%	62.7%	0.0%	37.3%	37.3%	0.0%	37.3%	37.3%
Maximum Green (s)	42.0	42.0	42.0	42.0	42.0	42.0	23.0	23.0	0.0	23.0	23.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
LeadLag											
Lead-Lag Optimize?											
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	None	None	None	None	None
Recall Mode	Min	Min	Min	Min	Min	Min	None	None	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	15.0	15.0	15.0	15.0	15.0
Flash Dont Walk (s)											
Pedestrian Calls (#/hr)											
Act Effct Green (s)	36.9	36.9	36.9	36.9	36.9	36.9	9.8	9.8	0	0	10.5
Actuated g/C Ratio	0.70	0.70	0.70	0.70	0.70	0.70	0.18	0.18	0.20	0.20	0.20
v/c Ratio	0.15	0.61	0.15	0.50	0.50	0.20	0.49	0.49	0.00	0.49	0.49
Control Delay	7.0	8.0	7.9	6.7	6.7	16.4	16.4	16.4	0.0	24.1	24.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.0	8.0	7.9	6.7	6.7	16.4	16.4	16.4	0.0	24.1	24.1
LOS	A	A	A	A	A	A	B	B	B	C	C
Approach Delay	A	A	A	A	A	A	16.4	16.4	16.4	24.1	24.1
Approach LOS	A	A	A	A	A	A	B	B	B	C	C
Intersection Summary	Other										
Area Type:	Other										
Cycle Length:	75										
Actuated Cycle Length:	53										
Natural Cycle:	60										
Control Type:	Actuated-Uncoordinated										
Maximum v/c Ratio:	0.61										
Intersection Signal Delay:	8.4										
Intersection Capacity Utilization:	55.4%										
Analysis Period (min):	15										



Spills and Phases: 3: Maple Road & Maplemere Road
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
4: Maple Road & Donna Lea Blvd

4/24/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕	↕	↔	↔	↔	↔
Volume (vph)	1439	29	23	1081	12	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	50	0	0	0	0
Storage Lanes	0	1	0	1	0	0
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Flt Protected	0.997		0.950	0.982		
Satd. Flow (prot)	3529	0	1770	3539	1672	0
Flt Permitted			0.950	0.982		
Satd. Flow (perm)	3529	0	1770	3539	1672	0
Link Speed (mph)	45		45	30		
Link Distance (ft)	1106		1000	355		
Travel Time (s)	16.8		15.2	8.1		
Adj. Flow (vph)	1971	40	30	1404	15	26
Shared Lane Traffic (%)						
Lane Group Flow (vph)	2011	0	30	1404	41	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12		12	12		
Link Offset(ft)	0		0	0		
Crosswalk Width(ft)	16		16	16		
Two way Left Turn Lane	Yes		Yes			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		15		9
Sign Control	Free	Free	Free	Stop		
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	50.7%					
Analysis Period (min)	15					
	ICU Level of Service: A					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
4: Maple Road & Donna Lea Blvd

4/24/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕	↕	↔	↔	↔	↔
Volume (veh/h)	1439	29	23	1081	12	21
Sign Control	Free	Free	Free	Stop		
Grade	0%		0%	0%		
Peak Hour Factor	0.73	0.73	0.77	0.77	0.82	0.82
Hourly flow rate (vph)	1971	40	30	1404	15	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLT		TWLT			
Median storage (veh)	2		2			
Upstream signal (ft)	1106					
pX, platoon unblocked		0.71		0.71	0.71	0.71
vC, conflicting volume		2011		2753	1005	1991
vC1, stage 1 conf vol					762	
vC2, stage 2 conf vol					2653	204
vCu, unblocked vol		1614		6.8	6.9	
IC, single (s)		4.1		5.8		
IC, 2 stage (s)		2.2		3.5	3.3	
IF (s)		90		86	96	
p0 queue free %		286		102	572	
cM capacity (veh/h)						
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	1314	697	30	702	702	40
Volume Left	0	0	30	0	0	15
Volume Right	1700	1700	286	1700	1700	214
cSH	0.77	0.41	0.10	0.41	0.41	0.19
Volume to Capacity	0	0	9	0	0	17
Queue Length 95th (ft)	0.0	0.0	19.1	0.0	0.0	25.7
Control Delay (s)			C			D
Lane LOS			C			D
Approach Delay (s)	0.0	0.4				
Approach LOS						D
Intersection Summary						
Average Delay	0.5					
Intersection Capacity Utilization	50.7%					
Analysis Period (min)	15					
	ICU Level of Service: A					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
5: Maple Road & Audubon Golf Club

4/24/2014



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	0	1417	14	8	1109	2	10	0	0	6	0
Volume (vph)	0	1417	14	8	1109	2	10	0	0	6	0
Ideal Flow (vpph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	50	0	0	0	0	0	0	0	0
Storage Lanes	1	0	1	0	0	0	0	0	0	0	0
Taper Length (ft)	25	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Flt Protected		0.999		0.950		0.948		0.970			
Flt Permitted	1863	3536	0	1770	3539	0	1713	0	0	1863	0
Satd. Flow (perm)	1863	3536	0	1770	3539	0	1713	0	0	1863	0
Link Speed (mph)	45	6.8	446	45	556	469	10.7	2.5			
Link Distance (ft)	446	6.8	446	45	556	469	10.7	2.5			
Travel Time (s)	6.8	10.7	8.4	10.7	8.4	10.7	8.4	10.7			
Adj. Flow (vph)	0	1540	15	9	1192	2	16	0	10	0	0
Shared Lane Traffic (%)	0	0.92	0.92	0.93	0.93	0.93	0.61	0.61	0.61	0.92	0.92
Lane Group Flow (vph)	0	1555	0	9	1194	0	0	26	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Right
Median Width (ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset (ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width (ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	15	15	15	15	15	15	15	15	15	15
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	49.6%
Analysis Period (min)	15
ICU Level of Service:	A

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
5: Maple Road & Audubon Golf Club

4/24/2014



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	0	1417	14	8	1109	2	10	0	6	0	0
Volume (veh/h)	0	1417	14	8	1109	2	10	0	6	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.93	0.93	0.93	0.61	0.61	0.61	0.92	0.92
Hourly flow rate (vph)	0	1540	15	9	1192	2	16	0	10	0	0
Pedestrians	0	0	0	0	0	0	0	0	0	0	0
Lane Width (ft)											
Walking Speed (ft/s)											
Percent Blockage											
Right turn flare (veh)											
Median type	TWLT	TWLT	TWLT	TWLT	TWLT	TWLT	TWLT	TWLT	TWLT	TWLT	TWLT
Median storage (veh)	2	2	2	2	2	2	2	2	2	2	2
Upstream signal (ft)											
pX, platoon unblocked											
vC, conflicting volume	1195	1555	1555	1555	1555	1555	2161	2760	778	1991	2766
vC1, stage 1 cont vol							1548	1548	1211	1211	1211
vC2, stage 2 cont vol							613	1212	780	1555	1555
vCu, unblocked vol	1195	1555	1555	1555	1555	1555	2161	2760	778	1991	2766
IC, single (s)	4.1	4.1	4.1	4.1	4.1	4.1	7.5	6.5	6.9	7.5	6.5
IC, 2 stage (s)							6.5	5.5	5.5	6.5	5.5
IF (s)	2.2	2.2	2.2	2.2	2.2	2.2	3.5	4.0	3.3	3.5	4.0
p0 queue free %	100	98	98	98	98	98	85	100	97	100	100
cM capacity (veh/h)	580	422	422	422	422	422	113	137	339	162	446

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	0	1027	529	9	795	400	26	0
Volume Left	0	0	0	9	0	0	16	0
Volume Right	0	0	15	0	0	2	10	0
cSH	1700	1700	1700	422	1700	1700	150	1700
Volume to Capacity	0.00	0.60	0.31	0.02	0.47	0.24	0.17	0.00
Queue Length 95th (ft)	0	0	0	2	0	0	15	0
Control Delay (s)	0.0	0.0	0.0	13.7	0.0	0.0	33.9	0.0
Lane LOS				B			D	A
Approach Delay (s)	0.0	0.1	0.1	33.9	0.0	0.0	0.0	0.0
Approach LOS				D			D	A

Intersection Summary	Average Delay
Average Delay	0.4
Intersection Capacity Utilization	49.6%
ICU Level of Service	A
Analysis Period (min)	15

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
6: Maple Road & North Forest Road

4/24/2014

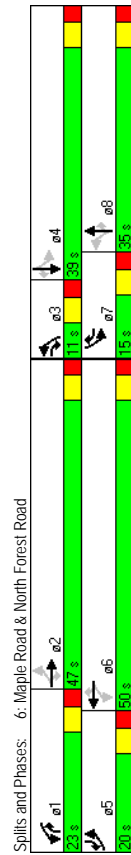
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	212	1079	143	242	831	96	92	359	208	169	395
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	415	220	315	220	315	150	125	220	250	250	250
Storage Lanes	1	1	1	1	1	1	1	1	1	1	1
Taper Length (ft)	90	115	60	25	95	25	95	25	90	90	25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.950		0.950		0.950		0.950		0.850		0.850
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1863	1583	1770	1863
Flt Permitted	0.174		0.092		0.151		0.166		0.166		0.166
Satd. Flow (perm)	324	3539	1583	1770	3539	1583	281	1863	1583	309	1863
Right Turn on Red	Yes	Yes	Yes	No	No	No	No	Yes	Yes	Yes	Yes
Satd. Flow (RTOR)	130		130		130		24		24		58
Link Speed (mph)	45		45		45		35		35		35
Link Distance (ft)	1705		820		529		608		608		608
Travel Time (s)	25.8		12.4		10.3		11.8		11.8		11.8
Peak Hour Factor	0.92	0.92	0.92	0.90	0.90	0.90	0.96	0.96	0.96	0.87	0.87
Adj. Flow (vph)	230	1173	155	269	923	107	96	374	217	194	454
Shared Lane Traffic (%)											
Lane Group Flow (vph)	230	1173	155	269	923	107	96	374	217	194	454
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Left	Right	Left	Right
Median Width(ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset(ft)	0		0		0		0		0		0
Crosswalk Width(ft)	16		16		16		16		16		16
Two way Left Turn Lane	Yes		Yes		Yes		Yes		Yes		Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	2	1	2	1	2	1	2	1
Number of Detectors	1	2	1	1	1	1	2	1	1	1	2
Detector Template	Left	Thru	Right	Left	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	100	20	100	20	100	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	6	20	20	6	20
Detector 1 Type	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94		94		94		94		94		94
Detector 2 Size(ft)	6		6		6		6		6		6
Detector 2 Type	Ch+Ex		Ch+Ex		Ch+Ex		Ch+Ex		Ch+Ex		Ch+Ex
Detector 2 Channel											
Detector 2 Extend (s)	0.0		0.0		0.0		0.0		0.0		0.0
Turn Type	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+ov
Protected Phases	5	2	3	1	6	7	3	8	1	7	4
Permitted Phases	2	2	2	6	6	6	8	8	8	4	4
Detector Phase	5	2	3	1	6	7	3	8	1	7	4

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
6: Maple Road & North Forest Road

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	1.0	4.0	1.0	1.0	4.0	1.0	1.0	4.0	1.0	1.0	4.0
Minimum Split (s)	7.0	35.0	7.0	7.0	35.0	7.0	7.0	35.0	7.0	7.0	35.0
Total Split (s)	20.0	47.0	11.0	23.0	50.0	15.0	11.0	35.0	23.0	15.0	39.0
Total Split (%)	16.7%	39.2%	9.2%	19.2%	41.7%	12.5%	9.2%	29.2%	19.2%	12.5%	32.5%
Maximum Green (s)	14.0	41.0	5.0	17.0	44.0	9.0	5.0	29.0	17.0	9.0	33.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Walk Time (s)	7.0		7.0		7.0		7.0		7.0		7.0
Flash Dont Walk (s)	22.0		22.0		22.0		22.0		22.0		22.0
Pedestrian Calls (#/hr)	0		0		0		0		0		0
Act Effct Green (s)	53.4	40.6	51.6	59.7	43.7	58.8	32.0	27.0	48.9	40.0	31.0
Actuated g/C Ratio	0.46	0.35	0.44	0.51	0.37	0.50	0.27	0.23	0.42	0.34	0.27
v/c Ratio	0.75	0.95	0.20	0.88	0.70	0.13	0.68	0.87	0.32	0.89	0.92
Control Delay	34.5	54.5	5.9	59.0	34.7	16.8	53.1	64.2	21.3	67.7	66.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.5	54.5	5.9	59.0	34.7	16.8	53.1	64.2	21.3	67.7	66.6
LOS	C	D	A	E	C	B	D	D	E	C	E
Approach Delay	46.7		46.7		38.3		49.1		46.7		56.0
Approach LOS	D		D		D		D		D		E
Intersection Summary	Other										
Area Type:	Other										
Cycle Length:	120										
Actuated Cycle Length:	116.6										
Natural Cycle:	95										
Control Type:	Actuated-Uncoordinated										
Maximum v/c Ratio:	0.95										
Intersection Signal Delay:	46.3										
Intersection Capacity Utilization:	91.5%										
Analysis Period (min):	15										



Spills and Phases: 6: Maple Road & North Forest Road
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
7: Sheridan Drive & Mill Street

4/24/2014

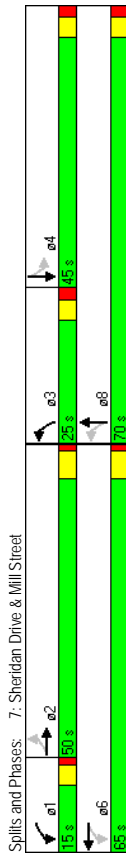
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	17	1405	24	121	1442	53	151	53	148	34	68
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vpph)	100	0	150	0	150	0	40	0	75	0	0
Storage Length (ft)	1	0	1	0	1	0	0	1	0	1	0
Storage Lanes	65	25	60	25	60	25	25	25	25	25	25
Taper Length (ft)	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.997		0.995		0.995		0.890		0.950		0.969
Flt Protected	0.950		0.950		0.950		0.950		0.950		0.950
Satd. Flow (prot)	1770	3529	0	1770	3522	0	1770	1658	0	1770	1805
Flt Permitted	0.089		0.081		0.081		0.590		0.608		0.608
Satd. Flow (perm)	166	3529	0	151	3522	0	1099	1658	0	1133	1805
Right Turn on Red		No		Yes		Yes		No		No	Yes
Satd. Flow (RTOR)				3		3					10
Link Speed (mph)	45		45		45		30		30		30
Link Distance (ft)	2782		977		977		838		838		362
Travel Time (s)	42.2		14.8		14.8		19.0		19.0		8.2
Peak Hour Factor	0.84	0.84	0.84	0.92	0.92	0.83	0.83	0.83	0.83	0.77	0.77
Adj. Flow (vph)	20	1673	29	132	1567	58	182	64	178	44	88
Shared Lane Traffic (%)											23
Lane Group Flow (vph)	20	1702	0	132	1625	0	182	242	0	44	111
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	12		12		12		12		12		12
Link Offset(ft)	0		0		0		0		0		0
Crosswalk Width(ft)	16		16		16		16		16		16
Two way Left Turn Lane	Yes		Yes		Yes		Yes		Yes		Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9	15	9	15	9	15
Number of Detectors	1	2	1	2	1	2	1	2	1	2	1
Detector Template	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left
Leading Detector (ft)	20	100	20	100	20	100	20	100	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	6	20	6	20	6	20	6	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94		94		94		94		94		94
Detector 2 Size(ft)	6		6		6		6		6		6
Detector 2 Type	CI+EX		CI+EX		CI+EX		CI+EX		CI+EX		CI+EX
Detector 2 Channel											
Detector 2 Extend (s)	0.0		0.0		0.0		0.0		0.0		0.0
Turn Type	Perm		pm+pt		pm+pt		pm+pt		Perm		Perm
Protected Phases	2		6		6		3		8		4
Permitted Phases	2		6		6		8		4		4
Detector Phase	2		1		6		3		8		4

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
7: Sheridan Drive & Mill Street

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase	4.0	4.0	1.0	4.0	4.0	1.0	4.0	4.0	4.0	4.0	4.0
Minimum Initial (s)	28.3	28.3	6.2	28.3	6.2	28.3	6.2	34.2	34.2	34.2	34.2
Minimum Split (s)	50.0	50.0	0.0	15.0	65.0	0.0	25.0	70.0	0.0	45.0	45.0
Total Split (s)	37.0%	37.0%	0.0%	11.1%	48.1%	0.0%	18.5%	51.9%	0.0%	33.3%	33.3%
Total Split (%)	44.5	44.5	10.7	59.5	19.8	64.8	39.8	39.8	39.8	39.8	39.8
Maximum Green (s)	4.3	4.3	3.2	4.3	3.2	4.3	3.2	3.2	3.2	3.2	3.2
Yellow Time (s)	1.2	1.2	1.1	1.2	1.1	1.2	2.0	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	5.5	5.5	4.0	4.3	5.5	4.0	5.2	5.2	4.0	5.2	5.2
Total Lost Time (s)	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lag	Lag	Lag
Lead/Lag	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Lead-Lag Optimize?	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Vehicle Extension (s)	None	None	None	None	None	None	Max	Max	Max	Max	Max
Recall Mode	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Walk Time (s)	15.0	15.0	15.0	15.0	15.0	15.0	22.0	22.0	22.0	22.0	22.0
Flash Dont Walk (s)	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Calls (#/hr)	45.1	45.1	60.7	59.5	64.8	64.8	39.8	39.8	39.8	39.8	39.8
Act Effct Green (s)	0.33	0.33	0.45	0.44	0.48	0.48	0.29	0.29	0.29	0.29	0.29
Actuated G/C Ratio	0.36	1.44	0.70	1.05	0.29	0.30	0.13	0.21	0.13	0.21	0.21
v/c Ratio	56.4	238.7	45.9	72.7	21.8	22.7	36.4	33.7	36.4	33.7	33.7
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	56.4	238.7	45.9	72.7	21.8	22.7	36.4	33.7	36.4	33.7	33.7
Total Delay	E	F	D	E	D	E	C	C	C	D	C
LOS	236.6	70.7	22.3	34.4	34.4	34.4	34.4	34.4	34.4	34.4	34.4
Approach Delay	F	E	C	C	C	C	C	C	C	C	C
Approach LOS											
Intersection Summary	Other										
Area Type:	Other										
Cycle Length:	135										
Actuated Cycle Length:	135										
Natural Cycle:	110										
Control Type:	Semi Act-Uncoord										
Maximum v/c Ratio:	1.44										
Intersection Signal Delay:	134.6										
Intersection Capacity Utilization:	78.4%										
Analysis Period (min):	15										



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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
 8: Sheridan Drive & North Forest Road

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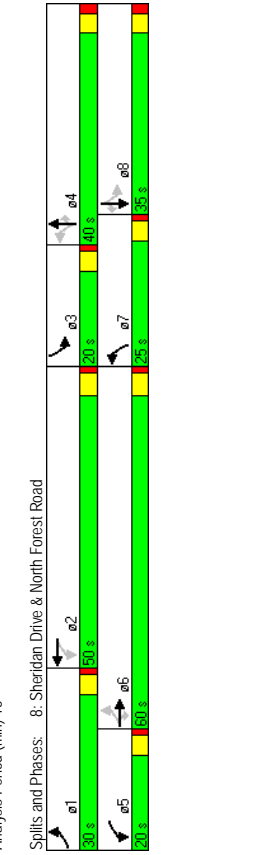
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	138	1335	293	305	1235	52	307	471	82	75	506
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	405	170	260	0	180	0	265	180	200	200	200
Storage Lanes	1	1	1	0	1	0	1	1	1	1	1
Taper Length (ft)	200	25	200	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95
Flt	0.850	0.850	0.994	0.994	0.994	0.850	0.850	0.850	0.850	0.850	0.850
Flt Protected	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950
Satd. Flow (prot)	1770	3539	1583	1770	3518	0	1770	1863	1583	1770	3539
Flt Permitted	0.073	0.069	0.069	0.069	0.069	0.164	0.152	0.152	0.152	0.152	0.152
Satd. Flow (perm)	136	3539	1583	129	3518	0	305	1863	1583	283	3539
Right Turn on Red	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Satd. Flow (RTOR)	138	138	138	3	3	3	69	69	69	69	213
Link Speed (mph)	45	45	45	45	45	45	40	40	40	40	35
Link Distance (ft)	954	2219	354	547	354	547	354	547	354	547	354
Travel Time (s)	14.5	33.6	9.3	9.3	9.3	9.3	6.9	6.9	6.9	6.9	6.9
Peak Hour Factor	0.94	0.94	0.94	0.93	0.93	0.93	0.89	0.89	0.89	0.95	0.95
Adj. Flow (vph)	147	1420	312	328	1328	56	345	529	92	79	533
Shared Lane Traffic (%)	147	1420	312	328	1384	0	345	529	92	79	533
Lane Group Flow (vph)	No	No	No	No	No	No	No	No	No	No	No
Enter Blocked Intersection	Left	Left	Right	Left	Right	Left	Left	Right	Left	Right	Right
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Right	Right
Median Width (ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset (ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width (ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	15	9	15	15	9	15	15	9
Number of Detectors	1	2	1	2	1	2	1	2	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru
Leading Detector (ft)	20	100	20	100	20	100	20	100	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size (ft)	20	6	20	20	6	20	6	20	20	6	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position (ft)	94	94	94	94	94	94	94	94	94	94	94
Detector 2 Size (ft)	6	6	6	6	6	6	6	6	6	6	6
Detector 2 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 2 Channel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	pm+pt	Perm	pm+pt	pm+pt	Perm	pm+pt	Perm	pm+pt	Perm	pm+pt	Perm
Protected Phases	1	6	6	2	2	4	4	4	4	8	8
Permitted Phases	6	6	6	2	2	7	7	7	7	4	3
Detector Phase	1	6	6	5	2	7	4	4	4	3	8

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
 8: Sheridan Drive & North Forest Road

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.3	27.9	27.9	8.3	27.9	8.3	27.9	27.9	27.9	8.3	27.9
Total Split (s)	30.0	60.0	60.0	20.0	50.0	0.0	25.0	40.0	40.0	20.0	35.0
Total Split (%)	21.4%	42.9%	42.9%	14.3%	35.7%	0.0%	17.9%	28.6%	28.6%	14.3%	25.0%
Maximum Green (s)	25.7	54.9	54.9	15.7	44.9	20.7	34.9	34.9	34.9	15.7	29.9
Yellow Time (s)	3.2	3.9	3.9	3.2	3.9	3.2	3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.1	1.2	1.1	1.2	1.1	1.2	1.1	1.1	1.1	1.1	1.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.3	5.1	5.1	4.3	5.1	4.0	4.3	5.1	5.1	4.3	5.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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
Recall Mode	None	Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0	0	0	0
Act Effct Green (s)	68.1	54.9	54.9	73.6	58.3	52.1	37.6	37.6	37.6	36.5	26.3
Actuated g/C Ratio	0.50	0.40	0.40	0.54	0.43	0.38	0.28	0.28	0.28	0.27	0.19
v/c Ratio	0.68	1.00	0.43	1.27	0.92	1.02	1.03	1.03	1.03	0.44	0.78
Control Delay	43.3	63.7	18.3	182.2	48.2	89.4	96.2	14.0	36.2	61.1	8.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.3	63.7	18.3	182.2	48.2	89.4	96.2	14.0	36.2	61.1	8.8
LOS	D	E	B	F	D	F	F	F	B	D	A
Approach Delay	54.6	73.9	73.9	73.9	73.9	73.9	73.9	73.9	73.9	73.9	73.9
Approach LOS	D	D	D	E	E	E	E	E	F	D	D



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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
9: Proposed Access Driveway & North Forest Road

4/24/2014



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	24	72	38	623	714	30
Volume (vph)	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	1.00	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.850				0.994	
Flt Protected	0.950			0.997		
Satd. Flow (prot)	1770	1583	0	1857	1852	0
Flt Permitted	0.950			0.997		
Satd. Flow (perm)	1770	1583	0	1857	1852	0
Link Speed (mph)	30			35	35	
Link Distance (ft)	223			310	171	
Travel Time (s)	5.1			6.0	3.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	26	78	41	677	776	33
Shared Lane Traffic (%)						
Lane Group Flow (vph)	26	78	0	718	809	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	15	15	9
Sign Control	Stop			Free	Free	
Direction, Lane #	EB 1	EB 2	NB 1	SB 1	SB 1	
Volume Total	26	78	718	809		
Volume Left	26	0	41	0		
Volume Right	0	78	0	33		
cSH	80	389	817	1700		
Volume to Capacity	0.33	0.20	0.05	0.48		
Queue Length 95th (ft)	31	19	4	0		
Control Delay (s)	70.6	16.6	1.3	0.0		
Lane LOS	F	C	A			
Approach Delay (s)	30.1		1.3	0.0		
Approach LOS	D					
Intersection Summary						
Average Delay	2.5					
Intersection Capacity Utilization	73.9%					
ICU Level of Service	D					
Analysis Period (min)	15					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
9: Proposed Access Driveway & North Forest Road

4/24/2014



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	24	72	38	623	714	30
Volume (veh/h)	1900	1900	1900	1900	1900	1900
Sign Control	Stop		Free	Free	Free	
Grade	0%		0%	0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	26	78	41	677	776	33
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)				None	None	
Median type				None	None	
Median storage (veh)				664		
Upstream signal (ft)	0.70					
pX, platoon unblocked	1552	792	809			
vC, conflicting volume						
vC1, stage 1 cont vol						
vC2, stage 2 cont vol	1575	792	809			
vCu, unblocked vol	6.4	6.2	4.1			
IC, 2 stage (s)						
IF (s)	3.5	3.3	2.2			
p0 queue free %	67	80	95			
cM capacity (veh/h)	80	389	817			
Direction, Lane #	EB 1	EB 2	NB 1	SB 1	SB 1	
Volume Total	26	78	718	809		
Volume Left	26	0	41	0		
Volume Right	0	78	0	33		
cSH	80	389	817	1700		
Volume to Capacity	0.33	0.20	0.05	0.48		
Queue Length 95th (ft)	31	19	4	0		
Control Delay (s)	70.6	16.6	1.3	0.0		
Lane LOS	F	C	A			
Approach Delay (s)	30.1		1.3	0.0		
Approach LOS	D					
Intersection Summary						
Average Delay	2.5					
Intersection Capacity Utilization	73.9%					
ICU Level of Service	D					
Analysis Period (min)	15					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
10: Sheridan Drive & Fenwick Road

4/24/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕	↕	↔	↔	↔	↔
Volume (vph)	1882	13	5	1771	13	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	75	0	0	0	0
Storage Lanes	0	1	0	1	0	0
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Flt Protected	0.999		0.950	0.979		
Satd. Flow (prot)	3536	0	1770	3539	1681	0
Flt Permitted	0.950		0.950	0.979		
Satd. Flow (perm)	3536	0	1770	3539	1681	0
Link Speed (mph)	45		45	30		
Link Distance (ft)	635		230	278		
Travel Time (s)	9.6		3.5	6.3		
Adj. Flow (vph)	2163	15	5	1884	17	23
Shared Lane Traffic (%)						
Lane Group Flow (vph)	2178	0	5	1884	40	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12		12	12		12
Link Offset(ft)	0		0	0		0
Crosswalk Width(ft)	16		16	16		16
Two way Left Turn Lane	Yes		Yes			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15	15	15	15	9
Sign Control	Free	Free	Free	Free	Stop	Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	62.4%					
Analysis Period (min)	15					
ICU Level of Service:	B					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
10: Sheridan Drive & Fenwick Road

4/24/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕	↕	↔	↔	↔	↔
Volume (veh/h)	1882	13	5	1771	13	17
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%		0%	0%		0%
Peak Hour Factor	0.87	0.87	0.94	0.94	0.75	0.75
Hourly flow rate (vph)	2163	15	5	1884	17	23
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLT		TWLT			
Median storage (veh)	2		2			
Upstream signal (ft)	635					
pX, platoon unblocked		0.51		0.51	0.51	0.51
vC, conflicting volume		2178		3123	1089	
vC1, stage 1 conf vol				2171		
vC2, stage 2 conf vol				953		
vCu, unblocked vol		1374		3244	0	
IC, single (s)		4.1		6.8	6.9	
IC, 2 stage (s)				5.8		
IF (s)		2.2		3.5	3.3	
p0 queue free %		98		82	96	
cM capacity (veh/h)		250		94	548	
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	1442	736	5	942	942	40
Volume Left	0	0	5	0	0	17
Volume Right	0	15	0	0	0	23
cSH	1700	1700	250	1700	1700	177
Volume to Capacity	0.85	0.43	0.02	0.55	0.55	0.23
Queue Length 95th (ft)	0	0	2	0	0	21
Control Delay (s)	0.0	0.0	19.7	0.0	0.0	31.1
Lane LOS			C			D
Approach Delay (s)	0.0	0.1				31.1
Approach LOS						D
Intersection Summary						
Average Delay	0.3					
Intersection Capacity Utilization	62.4%					
ICU Level of Service	B					
Analysis Period (min)	15					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
11: Sheridan Drive & Frankhauser Road

4/24/2014

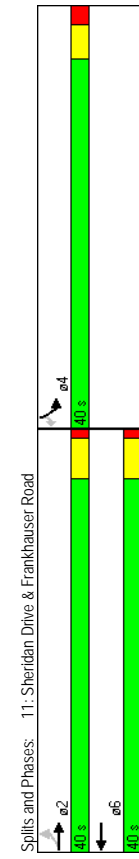
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (vph)	113	1783	1743	41	110	122
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105	0	0	0	0	50
Storage Lanes	1	0	0	1	1	1
Taper Length (ft)	65	25	25	25	25	25
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Flt Protected	0.950	0.997			0.850	
Satd. Flow (prot)	1770	3539	3529	0	1770	1583
Flt Permitted	0.070				0.950	
Satd. Flow (perm)	130	3539	3529	0	1770	1583
Right Turn on Red		Yes			Yes	
Satd. Flow (RTOR)		4			2	
Link Speed (mph)	45	45			30	
Link Distance (ft)	101.4	635			828	
Travel Time (s)	15.4	9.6			18.8	
Peak Hour Factor	0.90	0.90	0.91	0.91	0.82	0.82
Adj. Flow (vph)	126	1981	1915	45	134	149
Shared Lane Traffic (%)						
Lane Group Flow (vph)	126	1981	1960	0	134	149
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Right
Median Width(ft)	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0
Crosswalk Width(ft)	16	16			16	
Two way Left Turn Lane	Yes	Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	2	2	9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Left	Right	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94	94				
Detector 2 Size(ft)	6	6			6	
Detector 2 Type	CI+EX	CI+EX			CI+EX	
Detector 2 Channel						
Detector 2 Extend (s)	0.0	0.0			0.0	
Turn Type	Perm				Perm	
Protected Phases	2	2	6	4	4	4
Permitted Phases	2	2	6	4	4	4

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
11: Sheridan Drive & Frankhauser Road

4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	1.0	1.0
Minimum Split (s)	40.0	40.0	40.0	40.0	31.1	31.1
Total Split (s)	40.0	40.0	40.0	0.0	40.0	40.0
Total Split (%)	50.0%	50.0%	50.0%	0.0%	50.0%	50.0%
Maximum Green (s)	35.2	35.2	35.2	34.9	34.9	34.9
Yellow Time (s)	3.9	3.9	3.9	3.2	3.2	3.2
All-Red Time (s)	0.9	0.9	0.9	0.9	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.8	4.8	4.8	4.0	5.1	5.1
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0	15.0	15.0	19.0	19.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effct Green (s)	57.2	57.2	57.2	12.9	12.9	12.9
Actuated g/C Ratio	0.72	0.72	0.72	0.16	0.16	0.16
v/c Ratio	1.35	0.78	0.78	0.47	0.58	0.58
Control Delay	236.9	11.4	11.1	34.9	39.0	39.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	236.9	11.4	11.1	34.9	39.0	39.0
LOS	F	B	B	C	C	D
Approach Delay	24.8	11.1			37.0	
Approach LOS	C	B			D	



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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
12: Sheridan Drive & I-290 NB

4/24/2014

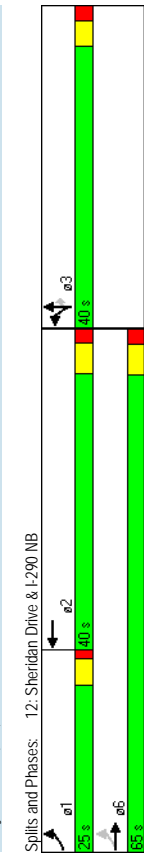
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	355	1491	0	1240	675	317	0	427	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	0	0	230	0	0	0	0	0	0
Storage Lanes	1	0	0	0	1	0	1	0	0	0	0
Taper Length (ft)	105	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.91	1.00	0.91	0.91	0.95	0.91	0.95	1.00	1.00	1.00
Flt Protected	0.950				0.947			0.885	0.850		
Satd. Flow (prot)	1770	5085	0	4816	0	1681	1484	1504	0	0	0
Flt Permitted	0.082					0.950	0.989				
Satd. Flow (perm)	153	5085	0	4816	0	1681	1484	1504	0	0	0
Right Turn on Red		Yes		Yes				Yes			Yes
Satd. Flow (RTOR)		139		45		30		29			30
Link Speed (mph)		610		193		830		423			9.6
Link Distance (ft)		9.2		2.9		18.9		9.6			9.6
Travel Time (s)		0.99		0.99		0.92		0.92			0.92
Peak Hour Factor		359		1506		0	1348	734		396	0
Adj. Flow (vph)		0.99		0.99		0.92		0.92		0.80	0.80
Lane Group Flow (vph)		359		1506		0	1348	734		396	0
Enter Blocked Intersection		No		No		No		No		No	No
Lane Alignment		Left		Left		Right		Left		Left	Right
Median Width(ft)		12		12		12		12		12	12
Link Offset(ft)		0		0		0		0		0	0
Crosswalk Width(ft)		16		16		16		16		16	16
Two way Left Turn Lane		1.00		1.00		1.00		1.00		1.00	1.00
Headway Factor		15		9		15		9		15	9
Turning Speed (mph)		1		2		1		2		1	2
Number of Detectors		Left		Thru		Left		Thru		Right	Right
Detector Template		20		100		20		100		20	20
Leading Detector (ft)		0		0		0		0		0	0
Trailing Detector (ft)		0		0		0		0		0	0
Detector 1 Position(ft)		20		6		20		6		20	20
Detector 1 Size(ft)		Ch+Ex		Ch+Ex		Ch+Ex		Ch+Ex		Ch+Ex	Ch+Ex
Detector 1 Type		0.0		0.0		0.0		0.0		0.0	0.0
Detector 1 Channel		0.0		0.0		0.0		0.0		0.0	0.0
Detector 1 Extend (s)		0.0		0.0		0.0		0.0		0.0	0.0
Detector 1 Queue (s)		0.0		0.0		0.0		0.0		0.0	0.0
Detector 1 Delay (s)		0.0		0.0		0.0		0.0		0.0	0.0
Detector 2 Position(ft)		94		94		94		94		94	94
Detector 2 Size(ft)		Ch+Ex		Ch+Ex		Ch+Ex		Ch+Ex		Ch+Ex	Ch+Ex
Detector 2 Type		6		6		6		6		6	6
Detector 2 Channel		0.0		0.0		0.0		0.0		0.0	0.0
Detector 2 Extend (s)		1		6		2		2		3	3
Turn Type		pm+pt		custom		custom		Perm		Perm	Perm
Protected Phases		6		6		3		3		3	3
Permitted Phases		1		6		2		2		3	3
Detector Phase											

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
12: Sheridan Drive & I-290 NB

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	1.0	4.0		4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	6.2	33.9		27.8		29.0	29.0	29.0	29.0	29.0	29.0
Total Split (s)	25.0	65.0		40.0		40.0	40.0	40.0	40.0	40.0	40.0
Total Split (%)	23.8%	61.9%		38.1%		38.1%	38.1%	38.1%	38.1%	38.1%	38.1%
Maximum Green (s)	20.7	59.1		34.2		34.8	34.8	34.8	34.8	34.8	34.8
Yellow Time (s)	3.2	3.9		3.9		3.2	3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.1	2.0		1.9		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.3	5.9		4.0		5.8	4.0	5.2	5.2	4.0	4.0
Lead/Lag	Lead	Lag		Lag		Lag	Lag	Lag	Lag	Lag	Lag
Vehicle Extension (s)	2.0	3.0		3.0		3.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	C-Max		C-Max		C-Max	None	None	None	None	None
Walk Time (s)	7.0			7.0		7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	21.0			15.0		15.0	15.0	15.0	15.0	15.0	15.0
Pedestrian Calls (#/hr)	0			0		0	0	0	0	0	0
Act Effct Green (s)	69.4	67.8		44.4		26.1	26.1	26.1	26.1	26.1	26.1
Actuated g/C Ratio	0.66	0.65		0.42		0.25	0.25	0.25	0.25	0.25	0.25
v/c Ratio	0.91	0.46		0.98		0.78	0.78	0.78	0.78	0.78	0.78
Control Delay	54.9	10.8		46.3		49.0	46.7	44.4	44.4	44.4	44.4
Queue Delay	0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.9	10.8		46.3		49.0	46.7	44.4	44.4	44.4	44.4
LOS	D	B		D		D	D	D	D	D	D
Approach Delay	19.3			46.3		46.3	46.8	46.8	46.8	46.8	46.8
Approach LOS	B			D		D	D	D	D	D	D



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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
13: Sheridan Drive & Harlem Road

4/24/2014

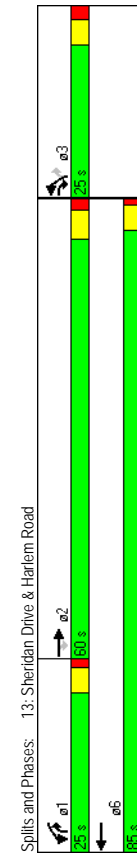
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔↔	↔↔	↔↔	↔↔	↔↔
Volume (vph)	1069	604	457	1100	267	776
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	215	0	140	0	0
Storage Lanes	1	1	1	2	2	2
Taper Length (ft)	230	100	100	100	25	25
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	0.88
Flt Protected	0.850		0.950		0.850	
Satd. Flow (prot)	3539	1583	3433	3539	3433	2787
Flt Permitted	0.950		0.950		0.950	
Satd. Flow (perm)	3539	1583	3433	3539	3433	2787
Right Turn on Red	No					Yes
Satd. Flow (RTOR)	45		45		35	101
Link Speed (mph)	314		610		338	
Link Distance (ft)	4.8		9.2		6.6	
Travel Time (s)	0.98	0.98	0.95	0.95	0.85	0.85
Peak Hour Factor	1091	616	481	1158	314	913
Adj. Flow (vph)	1091	616	481	1158	314	913
Lane Group Flow (vph)	No	No	No	No	No	No
Enter Blocked Intersection	Left	Right	Left	Left	Right	Right
Lane Alignment	12	24	24	24	24	24
Median Width(ft)	16		16		16	
Link Offset(ft)	16		16		16	
Crosswalk Width(ft)	1.00	1.00	1.00	1.00	1.00	1.00
Two way Left Turn Lane	9	15	2	1	15	9
Headway Factor	2	1	1	2	1	1
Turning Speed (mph)	Thru	Right	Left	Thru	Left	Right
Number of Detectors	100	20	20	100	20	20
Detector Template	0	0	0	0	0	0
Leading Detector (ft)	0	0	0	0	0	0
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	6	20	20	6	20	20
Detector 1 Size(ft)	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 1 Type	Detector 1 Channel	Detector 1 Extend (s)	Detector 1 Queue (s)	Detector 1 Delay (s)	Detector 2 Position(ft)	Detector 2 Size(ft)
Detector 2 Type	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	pm+ov	Prot	pm+ov	3	1	1
Protected Phases	2	3	1	6	3	1
Permitted Phases	2	3	1	6	3	1
Detector Phase	2	3	1	6	3	1

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
13: Sheridan Drive & Harlem Road

4/24/2014

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Switch Phase	↔	↔	↔	↔	↔	↔
Minimum Initial (s)	1.0	1.0	1.0	4.0	1.0	1.0
Minimum Split (s)	30.5	6.2	5.3	32.3	6.2	5.3
Total Split (s)	60.0	25.0	25.0	85.0	25.0	25.0
Total Split (%)	54.5%	22.7%	22.7%	77.3%	22.7%	22.7%
Maximum Green (s)	54.5	19.8	20.7	80.7	19.8	20.7
Yellow Time (s)	3.9	3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.6	2.0	1.1	1.1	2.0	1.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.2	4.3	4.3	5.2	4.3
Lead/Lag	Lag	Lead	Lead	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	C-Max	None	None	None	None	None
Walk Time (s)	7.0		7.0			
Flash Dont Walk (s)	18.0		21.0			
Pedestrian Calls (#/hr)	0		0			
Act Effct Green (s)	58.8	79.0	21.5	85.8	14.7	41.4
Actuated g/C Ratio	0.53	0.72	0.20	0.78	0.13	0.38
v/c Ratio	0.58	0.54	0.72	0.42	0.68	0.82
Control Delay	19.6	9.5	47.9	4.8	53.0	33.8
Queue Delay	0.0	0.0	0.0	0.3	0.0	0.0
Total Delay	19.6	9.5	47.9	5.1	53.0	33.8
LOS	B	A	D	A	D	C
Approach Delay	15.9		17.7		38.7	
Approach LOS	B		B		D	



Intersection Summary
Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 36 (33%), Referenced to phase 2:EBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 22.7
Intersection Capacity Utilization 64.9%
Analysis Period (min) 15
Spills and Phases: 13: Sheridan Drive & Harlem Road

Lanes, Volumes, Timings
SRF & Associates
Alternative 3
Page 26

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
14: 1-290 SB & Harlem Road 4/24/2014

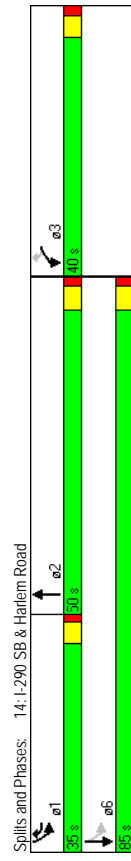
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (vph)	234	419	589	11	505	520
Ideal Flow (vppf)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	0	0	330	0
Storage Lanes	1	1	0	0	1	0
Taper Length (ft)	25	25	25	25	75	25
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	3529	0	1770	3539
Flt Permitted	0.950				0.152	
Satd. Flow (perm)	1770	1583	3529	0	283	3539
Right Turn on Red	Yes	Yes	Yes	Yes	Yes	Yes
Satd. Flow (RTOR)	64	2				
Link Speed (mph)	30	35				35
Link Distance (ft)	333	250				456
Travel Time (s)	7.6	4.9				8.9
Peak Hour Factor	0.69	0.69	0.77	0.77	0.92	0.92
Adj. Flow (vph)	339	607	765	14	549	565
Shared Lane Traffic (%)						
Lane Group Flow (vph)	339	607	779	0	549	565
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12	12			12	12
Link Offset(ft)	0	0			0	0
Crosswalk Width(ft)	16	16			16	16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9			9	15
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (ft)	20	20	100		20	100
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	20	6		20	6
Detector 1 Type	CI+EX	CI+EX	CI+EX		CI+EX	CI+EX
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			CI+EX			CI+EX
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type		pm+ov			pm+pl	
Protected Phases	3	1	2		1	6
Permitted Phases		3			6	
Detector Phase	3	1	2		1	6

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
14: 1-290 SB & Harlem Road 4/24/2014

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	22.0	9.2	30.6		9.2	21.0
Total Split (s)	40.0	35.0	50.0	0.0	35.0	85.0
Total Split (%)	32.0%	28.0%	40.0%	0.0%	28.0%	68.0%
Maximum Green (s)	35.2	30.7	45.0		30.7	80.0
Yellow Time (s)	3.2	3.2	3.6		3.2	3.6
All-Red Time (s)	1.6	1.1	1.4		1.1	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.8	4.3	5.0	4.0	4.3	5.0
Lead/Lag		Lead	Lag		Lead	
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	Min		None	None
Walk Time (s)			10.0			
Flash Dont Walk (s)			15.0			
Pedestrian Calls (#/hr)			0			
Act Effct Green (s)	24.0	57.9	28.7		62.9	62.2
Actuated g/C Ratio	0.25	0.60	0.30		0.65	0.65
v/c Ratio	0.77	0.62	0.74		0.87	0.25
Control Delay	47.3	14.8	35.9		37.9	8.1
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	47.3	14.8	35.9		37.9	8.1
LOS	D	B	D		D	A
Approach Delay	26.5		35.9			22.8
Approach LOS	C		D			C

Intersection Summary

Area Type:	Other
Cycle Length:	125
Actuated Cycle Length:	96.3
Natural Cycle:	80
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.87
Intersection Signal Delay:	27.6
Intersection Capacity Utilization:	69.3%
Analysis Period (min):	15



Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
17: Proposed Access Driveway & Frankhauser Road

4/24/2014

	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W					4
Volume (vph)	140	0	75	79	0	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fit	0.931					
Fit Protected	0.950					
Satd. Flow (prot)	1770	0	1734	0	0	1863
Fit Permitted	0.950					
Satd. Flow (perm)	1770	0	1734	0	0	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	236		828			109
Travel Time (s)	5.4		18.8			2.5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	152	0	82	86	0	100
Shared Lane Traffic (%)						
Lane Group Flow (vph)	152	0	168	0	0	100
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	9	9	15	15
Sign Control	Stop	Free	Free	Free	Free	Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	23.2%					
Analysis Period (min)	15					
ICU Level of Service	A					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
17: Proposed Access Driveway & Frankhauser Road

4/24/2014

	WBL	WBR	NBT	NBR	SBL	SBT
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W					4
Volume (veh/h)	140	0	75	79	0	92
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	152	0	82	86	0	100
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)			828			
pX, platoon unblocked						
vC, conflicting volume	224	124				167
vC1, stage 1 conf vol						
vC2, stage 2 conf vol	224	124				167
vCu, unblocked vol	6.4	6.2				4.1
IC, single (s)						
IC, 2 stage (s)						
IF (s)	3.5	3.3				2.2
p0 queue free %	80	100				100
cM capacity (veh/h)	764	926				1410
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	152	167	100			
Volume Left	152	0	0			
Volume Right	0	86	0			
cSH	764	1700	1410			
Volume to Capacity	0.20	0.10	0.00			
Queue Length 95th (ft)	18	0	0			
Control Delay (s)	10.9	0.0	0.0			
Lane LOS	B					
Approach Delay (s)	10.9	0.0	0.0			
Approach LOS	B					
Intersection Summary						
Average Delay	3.9					
Intersection Capacity Utilization	23.2%					
ICU Level of Service	A					
Analysis Period (min)	15					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
52: Sheridan Drive & Proposed Access Driveway

4/24/2014



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (vph)	40	1709	1608	135	58	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	0	0	0	0	0
Storage Lanes	1	0	0	0	1	0
Taper Length (ft)	25	0.95	0.95	0.95	1.00	1.00
Lane Util. Factor	1.00	0.988	0.979	0.979	0.922	0.922
Flt Protected	0.950					
Satd. Flow (prot)	1770	3539	3497	0	1681	0
Flt Permitted	0.950				0.979	
Satd. Flow (perm)	1770	3539	3497	0	1681	0
Link Speed (mph)	45	45	45	30	30	30
Link Distance (ft)	484	954	954	341	341	341
Travel Time (s)	7.3	14.5	14.5	7.8	7.8	7.8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	43	1858	1748	147	63	87
Shared Lane Traffic (%)						
Lane Group Flow (vph)	43	1858	1895	0	150	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right
Median Width(ft)	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16
Two way Left Turn Lane	Yes					
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	Free	Free	Free	Stop	Stop
Sign Control	Free	Free	Free	Free	Stop	Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	63.5%					
Analysis Period (min)	15					
ICU Level of Service:	B					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
52: Sheridan Drive & Proposed Access Driveway

4/24/2014



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (veh/h)	40	1709	1608	135	58	80
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	43	1858	1748	147	63	87
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None TWLTL					
Median storage (veh)	2					
Upstream signal (ft)	954					
pX, platoon unblocked	0.62				0.62	0.62
vC, conflicting volume	1895				2837	947
vC1, stage 1 cont vol					1821	
vC2, stage 2 cont vol					1016	
vCu, unblocked vol	1223				2738	0
IC, single (s)	4.1				6.8	6.9
IC, 2 stage (s)					5.8	
IF (s)	2.2				3.5	3.3
p0 queue free %	88				54	87
cM capacity (veh/h)	352				138	674
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	43	929	929	1165	729	150
Volume Left	43	0	0	0	0	63
Volume Right	0	0	0	0	147	87
cSH	352	1700	1700	1700	1700	256
Volume to Capacity	0.12	0.55	0.55	0.69	0.43	0.59
Queue Length 95th (ft)	10	0	0	0	0	84
Control Delay (s)	16.7	0.0	0.0	0.0	0.0	37.1
Lane LOS	C					E
Approach Delay (s)	0.4			0.0		37.1
Approach LOS				E		E
Intersection Summary						
Average Delay	1.6					
Intersection Capacity Utilization	63.5%					
ICU Level of Service	B					
Analysis Period (min)	15					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
56: Maple Road & Proposed North Driveway 4/24/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔↔	↔↔	↔↔	↔↔	↔↔
Volume (vph)	1287	173	133	976	128	137
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	225	0	150	0	150
Storage Lanes	0	1	0	1	0	1
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Flt Protected	0.982		0.950		0.950	0.850
Satd. Flow (prot)	3476	0	1770	3539	1770	1583
Flt Permitted	0.950		0.950		0.950	
Satd. Flow (perm)	3476	0	1770	3539	1770	1583
Link Speed (mph)	45		45	30		30
Link Distance (ft)	1000		928	337		337
Travel Time (s)	15.2		14.1	7.7		7.7
Adj. Flow (vph)	1399	188	145	1061	139	149
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1587	0	145	1061	139	149
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12		12	12		12
Link Offset(ft)	0		0	0		0
Crosswalk Width(ft)	16		16	16		16
Two way Left Turn Lane	Yes		Yes			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15	15	15	15	9
Sign Control	Free	Free	Free	Free	Stop	Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	65.5%					
Analysis Period (min)	15					
	ICU Level of Service: C					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
56: Maple Road & Proposed North Driveway 4/24/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔↔	↔↔	↔↔	↔↔	↔↔
Volume (veh/h)	1287	173	133	976	128	137
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%		0%	0%		0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1399	188	145	1061	139	149
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						6
Median type				TWLTL		
Median storage (veh)	2			2		
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume		1587		2312		793
vC1, stage 1 cont vol				1493		
vC2, stage 2 cont vol				820		
vCu, unblocked vol		1587		2312		793
IC, single (s)		4.1		6.8		6.9
IC, 2 stage (s)				5.8		
IF (s)		2.2		3.5		3.3
p0 queue free %		65		0		55
cM capacity (veh/h)		410		138		331
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	933	654	145	530	530	288
Volume Left	0	0	145	0	0	139
Volume Right	0	188	0	0	0	149
cSH	1700	1700	410	1700	1700	286
Volume to Capacity	0.55	0.38	0.35	0.31	0.31	1.01
Queue Length 95th (ft)	0	0	39	0	0	263
Control Delay (s)	0.0	0.0	18.5	0.0	0.0	80.7
Lane LOS			C			F
Approach Delay (s)	0.0	2.2				
Approach LOS						F
Intersection Summary						
Average Delay	8.4					
Intersection Capacity Utilization	65.5%					
Analysis Period (min)	15					
	ICU Level of Service: C					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
59: Sheridan Drive & Proposed Access Driveway

4/24/2014



	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group						
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (vph)	234	1666	1591	97	82	185
Ideal Flow (vpph)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75	0	0	0	0	0
Storage Lanes	1	0	0	1	1	1
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Flt Protected	0.950	0.991			0.950	0.850
Satd. Flow (prot)	1770	3539	3507	0	1770	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	3539	3507	0	1770	1583
Link Speed (mph)	45	45	45	30	30	30
Link Distance (ft)	230	484	280			
Travel Time (s)	3.5	7.3	6.4			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	254	1811	1729	105	89	201
Shared Lane Traffic (%)						
Lane Group Flow (vph)	254	1811	1834	0	89	201
Enter Blocked Intersection	No	Yes	No	No	No	No
Lane Alignment	Left	Left	Right	Right	Left	Right
Median Width(ft)	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16
Two way Left Turn Lane	Yes					
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	9	15	9	9
Sign Control	Free	Free	Free	Stop	Stop	Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	74.6%					
Analysis Period (min)	15					
ICU Level of Service:	D					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
59: Sheridan Drive & Proposed Access Driveway

4/24/2014



	EBL	EBT	WBT	WBR	SBL	SBR
Movement	↔	↔	↔	↔	↔	↔
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (veh/h)	234	1666	1591	97	82	185
Sign Control	Free	Free	Free	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	254	1811	1729	105	89	201
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL None					
Median storage (veh)	2					
Upstream signal (ft)	865					
pX, platoon unblocked	0.63					
vC, conflicting volume	1835				3196	917
vC1, stage 1 cont vol					1782	
vC2, stage 2 cont vol					1414	
vCu, unblocked vol	1835				3310	917
IC, single (s)	4.1				6.8	6.9
IC, 2 stage (s)					5.8	
IF (s)	2.2				3.5	3.3
p0 queue free %	23				0	27
cM capacity (veh/h)	328				63	274
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1 SB 2
Volume Total	254	905	905	1153	682	89 201
Volume Left	254	0	0	0	0	89 0
Volume Right	0	0	0	0	105	0 201
cSH	328	1700	1700	1700	1700	63 274
Volume to Capacity	0.77	0.53	0.53	0.68	0.40	1.41 0.73
Queue Length 95th (ft)	155	0	0	0	0	191 131
Control Delay (s)	45.2	0.0	0.0	0.0	0.0	366.9 47.2
Lane LOS	E					F E
Approach Delay (s)	5.6			0.0	145.4	F F
Approach LOS						
Intersection Summary						
Average Delay	12.8					
Intersection Capacity Utilization	74.6%					
ICU Level of Service	D					
Analysis Period (min)	15					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
 1: Maple Road & Millersport Hwy SB
 4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (vph)	18	719	810	305	51	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	0	0	0	0	0
Storage Lanes	1	1	1	1	1	1
Taper Length (ft)	35	100	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00
Flt Protected	0.950	0.850	0.950	0.850	0.950	0.850
Satd. Flow (prot)	1770	3539	3539	1583	1770	1583
Flt Permitted	0.329	0.950	0.950	0.950	0.950	0.950
Satd. Flow (perm)	613	3539	3539	1583	1770	1583
Right Turn on Red		Yes	Yes	Yes	Yes	Yes
Satd. Flow (RTOR)		45	45	30	30	106
Link Speed (mph)		555	654	281	281	281
Link Distance (ft)		8.4	9.9	6.4	6.4	6.4
Travel Time (s)		0.91	0.96	0.96	0.78	0.78
Peak Hour Factor		20	790	844	318	65
Adj. Flow (vph)		20	790	844	318	65
Shared Lane Traffic (%)		20	790	844	318	65
Lane Group Flow (vph)		20	790	844	318	65
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Right
Median Width(ft)	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	2	2	9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94	94	94	6	6	6
Detector 2 Size(ft)	6	6	6	6	6	6
Detector 2 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 2 Channel						
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	2	6	pm+ov	4	4
Protected Phases						
Permitted Phases	2	2	6	6	4	4
Detector Phase	2	2	6	4	4	4

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
 1: Maple Road & Millersport Hwy SB
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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	1.0	1.0	1.0
Minimum Split (s)	9.1	9.1	9.1	6.2	6.2	6.2
Total Split (s)	40.0	40.0	40.0	30.0	30.0	30.0
Total Split (%)	57.1%	57.1%	57.1%	42.9%	42.9%	42.9%
Maximum Green (s)	34.9	34.9	34.9	25.4	25.4	25.4
Yellow Time (s)	3.9	3.9	3.9	3.2	3.2	3.2
All-Red Time (s)	1.2	1.2	1.2	1.4	1.4	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	4.6	4.6	4.6
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Min	C-Min	C-Min	None	None	None
Act Effct Green (s)	52.0	52.0	52.0	70.0	8.3	8.3
Actuated g/C Ratio	0.74	0.74	0.74	1.00	0.12	0.12
v/c Ratio	0.04	0.30	0.32	0.20	0.31	0.38
Control Delay	3.3	3.6	6.5	0.2	31.3	10.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.3	3.6	6.5	0.2	31.3	10.5
LOS	A	A	A	A	C	B
Approach Delay						
Approach LOS	A	A	A	A	C	B

Intersection Summary



Splits and Phases: 1: Maple Road & Millersport Hwy SB

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
2: Maple Road & Millersport Hwy NB

4/24/2014

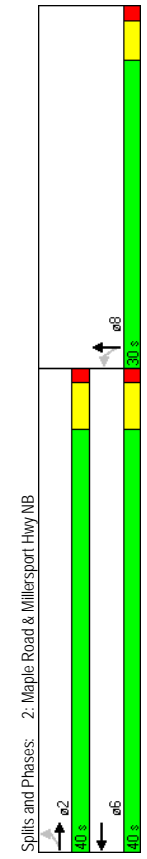
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	42	726	0	0	968	57	147	1	463	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	0	0	0	0	0	0	0	0	0
Storage Lanes	1	0	0	0	0	0	0	0	0	0	0
Taper Length (ft)	50	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.950				0.992		0.950		0.850		
Satd. Flow (prot)	1770	3539	0	0	3511	0	1770	1583	0	0	0
Flt Permitted	0.188				0.950		0.950				
Right Turn on Red	350	3539	0	0	3511	0	1770	1583	0	0	0
Satd. Flow (RTOR)			Yes		Yes		Yes	Yes			Yes
Link Speed (mph)	45	45	12	45	45	12	113	30	30	30	30
Link Distance (ft)	654	1770	263	654	1770	263	319	263	6.0	6.0	6.0
Travel Time (s)	9.9	26.8	7.3	9.9	26.8	7.3	9.9	7.3	6.0	6.0	6.0
Peak Hour Factor	0.85	0.85	0.85	0.93	0.93	0.93	0.93	0.93	0.93	0.92	0.92
Adj. Flow (vph)	49	854	0	0	1041	61	158	1	498	0	0
Shared Lane Traffic (%)											
Lane Group Flow (vph)	49	854	0	0	1102	0	158	499	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9	15	9	15	9	15
Number of Detectors	1	2	2	1	2	2	1	2	2	1	2
Detector Template	Left	Thru	Thru	Left	Thru	Thru	Left	Thru	Thru	Left	Thru
Leading Detector (ft)	20	100	100	20	100	100	20	100	100	20	100
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	6	6	20	6	6	20	6
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94	94	94	94	94	94	94	94	94	94	94
Detector 2 Size(ft)	6	6	6	6	6	6	6	6	6	6	6
Detector 2 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 2 Channel											
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm
Protected Phases	2	2	2	2	2	2	2	2	2	2	2
Permitted Phases	2	2	2	2	2	2	2	2	2	2	2
Detector Phase	2	2	2	2	2	2	2	2	2	2	2

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
2: Maple Road & Millersport Hwy NB

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Minimum Initial (s)	1.0	1.0	1.0	4.0	4.0	4.0	1.0	1.0	1.0	1.0	1.0
Minimum Split (s)	6.1	6.1	6.1	9.1	9.1	9.1	6.2	6.2	6.2	6.2	6.2
Total Split (s)	40.0	40.0	40.0	0.0	0.0	0.0	30.0	30.0	30.0	0.0	0.0
Total Split (%)	57.1%	57.1%	57.1%	0.0%	0.0%	0.0%	42.9%	42.9%	42.9%	0.0%	0.0%
Maximum Green (s)	34.9	34.9	34.9	34.9	34.9	34.9	25.4	25.4	25.4	25.4	25.4
Yellow Time (s)	3.9	3.9	3.9	3.9	3.9	3.9	3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.2	1.2	1.2	1.2	1.2	1.2	1.4	1.4	1.4	1.4	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	4.0	4.0	4.0	4.6	4.6	4.6	4.0	4.0
Lead-Lag											
Lead-Lag Optimize?											
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	None	None	None	None	None
Recall Mode	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min
Act Effct Green (s)	37.6	37.6	37.6	37.6	37.6	37.6	22.7	22.7	22.7	22.7	22.7
Actuated g/C Ratio	0.54	0.54	0.54	0.54	0.54	0.54	0.32	0.32	0.32	0.32	0.32
v/c Ratio	0.26	0.45	0.58	0.58	0.58	0.58	0.27	0.84	0.84	0.84	0.84
Control Delay	16.5	12.5	13.3	13.3	13.3	13.3	17.7	31.0	31.0	31.0	31.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.5	12.5	13.3	13.3	13.3	13.3	17.7	31.0	31.0	31.0	31.0
LOS	B	B	B	B	B	B	B	B	B	C	C
Approach Delay	12.7	12.7	12.7	13.3	13.3	13.3	27.8	27.8	27.8	27.8	27.8
Approach LOS	B	B	B	B	B	B	C	C	C	C	C
Intersection Summary											
Area Type:	Other										
Cycle Length:	70										
Actuated Cycle Length:	70										
Offset:	5 (7%), Referenced to phase 2:EBTL and 6:WBT, Start of Green										
Natural Cycle:	50										
Control Type:	Actuated-Coordinated										
Maximum v/c Ratio:	0.84										
Intersection Signal Delay:	16.7										
Intersection LOS:	B										
Intersection Capacity Utilization:	71.7%										
Analysis Period (min):	15										



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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
3: Maple Road & Maplemere Road

4/24/2014

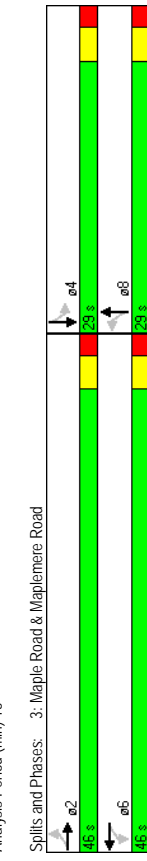
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	21	1054	46	12	1016	28	47	3	16	34	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	70	0	0	0	0	0	0	0	0
Storage Lanes	1	0	1	0	0	0	0	0	0	0	0
Taper Length (ft)	50	25	50	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00
Flt Permitted	0.994			0.996			0.967			0.957	
Satd. Flow (prot)	1770	3518	0	1770	3525	0	1740	0	1740	0	1724
Satd. Flow (perm)	0.216	0.177		0.177			0.735		0.735		0.793
Right Turn on Red	402	3518	0	330	3525	0	1324	0	1324	0	1414
Satd. Flow (RTOR)	9	Yes	6	Yes	6	Yes	23	Yes	23	Yes	28
Link Speed (mph)	45		45		45		30		30		30
Link Distance (ft)	1770		1106		1106		378		378		402
Travel Time (s)	26.8		16.8		16.8		8.6		8.6		9.1
Peak Hour Factor	0.86	0.86	0.86	0.91	0.91	0.91	0.60	0.60	0.60	0.58	0.58
Adj. Flow (vph)	24	1226	53	13	1116	31	78	5	27	59	0
Shared Lane Traffic (%)	24	1279	0	13	1147	0	110	0	110	0	87
Lane Group Flow (vph)	No	No	No	No	No	No	No	No	No	No	No
Enter Blocked Intersection	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	12	0	12	0	12	0	0	0	0	0	0
Link Offset(ft)	16	0	16	0	16	0	16	0	16	0	16
Crosswalk Width(ft)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9	15	9	15	9	15
Number of Detectors	1	2	1	2	1	2	1	2	1	2	1
Detector Template	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left
Leading Detector (ft)	20	100	20	100	20	100	20	100	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	6	20	6	20	6	20	6	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94	94	94	94	94	94	94	94	94	94	94
Detector 2 Size(ft)	6	6	6	6	6	6	6	6	6	6	6
Detector 2 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 2 Channel											
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm
Protected Phases	2	2	6	6	6	6	8	8	8	8	4
Permitted Phases	2	2	6	6	6	6	8	8	8	8	4
Detector Phase	2	2	6	6	6	6	8	8	8	8	4

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
3: Maple Road & Maplemere Road

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	9.0	9.0	9.0	9.0	9.0	27.0	27.0	27.0	27.0	27.0
Total Split (s)	46.0	46.0	0.0	46.0	46.0	0.0	29.0	29.0	0.0	29.0	29.0
Total Split (%)	61.3%	61.3%	0.0%	61.3%	61.3%	0.0%	38.7%	38.7%	0.0%	38.7%	38.7%
Maximum Green (s)	41.0	41.0	41.0	41.0	41.0	41.0	24.0	24.0	24.0	24.0	24.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Lead-Lag Optimize?											
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	None	None	None	None	None
Recall Mode	Min	Min	Min	Min	Min	Min	None	None	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	15.0	15.0	15.0	15.0	15.0
Flash Dont Walk (s)							0	0	0	0	0
Pedestrian Calls (#/hr)											
Act Effct Green (s)	31.0	31.0	31.0	31.0	31.0	31.0	9.0	9.0	9.0	9.0	9.0
Actuated g/C Ratio	0.68	0.68	0.68	0.68	0.68	0.68	0.20	0.20	0.20	0.20	0.20
v/c Ratio	0.09	0.54	0.06	0.48	0.48	0.48	0.40	0.40	0.40	0.29	0.29
Control Delay	5.8	6.8	5.5	6.3	6.3	6.3	19.4	19.4	19.4	15.7	15.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.8	6.8	5.5	6.3	6.3	6.3	19.4	19.4	19.4	15.7	15.7
LOS	A	A	A	A	A	A	B	B	B	B	B
Approach Delay	6.8	6.8	6.3	6.3	6.3	6.3	19.4	19.4	19.4	15.7	15.7
Approach LOS	A	A	A	A	A	A	B	B	B	B	B
Intersection Summary	Other										
Area Type:	Other										
Cycle Length:	75										
Actuated Cycle Length:	45.9										
Natural Cycle:	60										
Control Type:	Actuated-Uncoordinated										
Maximum v/c Ratio:	0.54										
Intersection Signal Delay:	7.4										
Intersection Capacity Utilization:	43.3%										
Analysis Period (min):	15										



Lanes, Volumes, Timings
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
4: Maple Road & Donna Lea Blvd

4/24/2014

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔	↔	↔↔	↔	↔
Volume (veh/h)	1099	6	13	1031	24	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	50	0	0	0	0
Storage Lanes	0	1	0	1	0	0
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Flt Protected	0.999		0.950		0.904	
Flt Permitted			0.986		0.986	
Satd. Flow (prot)	3536	0	1770	3539	1660	0
Satd. Flow (perm)	3536	0	1770	3539	1660	0
Link Speed (mph)	45		45		30	
Link Distance (ft)	1106		1002		355	
Travel Time (s)	16.8		15.2		8.1	
Peak Hour Factor	0.79	0.79	0.87	0.87	0.76	0.76
Adj. Flow (vph)	1391	8	15	1185	32	80
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1399	0	15	1185	112	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12		12		12	
Link Offset(ft)	0		0		0	
Crosswalk Width(ft)	16		16		16	
Two way Left Turn Lane	Yes		Yes			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		15	15	9
Sign Control	Free	Free	Free	Free	Stop	Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	42.3%					
Analysis Period (min)	15					
ICU Level of Service:	A					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
4: Maple Road & Donna Lea Blvd

4/24/2014

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔	↔	↔↔	↔	↔
Volume (veh/h)	1099	6	13	1031	24	61
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%		0%		0%	
Peak Hour Factor	0.79	0.79	0.87	0.87	0.76	0.76
Hourly flow rate (vph)	1391	8	15	1185	32	80
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			TWLTL			
Median storage (veh)	2			2		
Upstream signal (ft)	1106					
pX, platoon unblocked			0.80		0.80	0.80
vC, conflicting volume			1399		2017	699
vC1, stage 1 conf vol					1395	
vC2, stage 2 conf vol					622	
vCu, unblocked vol			995		1770	120
IC, single (s)			4.1		6.8	6.9
IC, 2 stage (s)					5.8	
IF (s)			2.2		3.5	3.3
p0 queue free %			97		86	89
cM capacity (veh/h)			552		225	726
Direction, Lane #						
EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	
927	471	15	593	593	112	
Volume Total	0	0	15	0	0	32
Volume Left	0	8	0	0	0	80
Volume Right	1700	1700	552	1700	1700	446
cSH	0.55	0.28	0.03	0.35	0.35	0.25
Volume to Capacity	0	0	2	0	0	25
Queue Length 95th (ft)	0.0	0.0	11.7	0.0	0.0	15.8
Control Delay (s)			B			C
Lane LOS			B			C
Approach Delay (s)	0.0		0.1			15.8
Approach LOS			C			C
Intersection Summary						
Average Delay	0.7					
Intersection Capacity Utilization	42.3%					
ICU Level of Service	A					
Analysis Period (min)	15					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
5: Maple Road & Audubon Golf Club

4/24/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	1	1018	4	1	1259	2	13	0	0	3	1
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	100	0	50	0	50	0	0	0	0	0	0
Storage Length (ft)	1	0	1	0	1	0	0	0	0	0	0
Storage Lanes	25	25	25	25	25	25	25	25	25	25	25
Taper Length (ft)	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.999						0.976				
Flt Protected	0.950			0.950			0.960				0.950
Satd. Flow (prot)	1770	3536	0	1770	3539	0	1745	0	1745	0	1770
Flt Permitted	0.950			0.950			0.960				0.950
Satd. Flow (perm)	1770	3536	0	1770	3539	0	1745	0	1745	0	1770
Link Speed (mph)	45	45	45	45	45	45	30	30	30	30	30
Link Distance (ft)	446	446	446	556	556	469	469	111	111	111	111
Travel Time (s)	6.8	8.4	8.4	10.7	10.7	2.5	2.5				
Adj. Flow (vph)	1	1107	4	1	1368	2	14	0	3	1	0
Shared Lane Traffic (%)											
Lane Group Flow (vph)	1	1111	0	1	1370	0	0	17	0	0	1
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Right
Median Width (ft)	12	12	12	12	12	12	0	0	0	0	0
Link Offset (ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width (ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane	Yes			Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9	15	15	9	15	9
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop
Intersection Summary											
Area Type:	Other										
Control Type:	Unsignalized										
Intersection Capacity Utilization	44.9%										
ICU Level of Service:	A										
Analysis Period (min)	15										

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
5: Maple Road & Audubon Golf Club

4/24/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	1	1018	4	1	1259	2	13	0	3	1	0
Volume (veh/h)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop
Grade	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Peak Hour Factor	1	1107	4	1	1368	2	14	0	3	1	0
Hourly flow rate (vph)											
Pedestrians											
Lane Width (ft)											
Walking Speed (ft/s)											
Percent Blockage											
Right turn flare (veh)											
Median type											
Median storage (veh)											
Upstream signal (ft)											
pX, platoon unblocked											
vC, conflicting volume	1371		1111				1797	2484	555	1930	2485
vC1, stage 1 conf vol							1111	1111		1372	1372
vC2, stage 2 conf vol							686	1373		559	1113
vCu, unblocked vol	1371		1111				1797	2484	555	1930	2485
IC, single (s)	4.1		4.1				7.5	6.5	6.9	7.5	6.5
IC, 2 stage (s)							6.5	5.5		6.5	5.5
IF (s)	2.2		2.2				3.5	4.0	3.3	3.5	4.0
p0 queue free %	100		100				93	100	99	99	100
cM capacity (veh/h)	497		624				194	165	475	144	165
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1			
Volume Total	1	738	373	1	912	458	17	1			
Volume Left	1	0	0	1	0	0	14	1			
Volume Right	0	0	4	0	0	2	3	0			
cSH	497	1700	1700	624	1700	1700	218	144			
Volume to Capacity	0.00	0.43	0.22	0.00	0.54	0.27	0.08	0.01			
Queue Length 95th (ft)	0	0	0	0	0	0	6	1			
Control Delay (s)	12.3	0.0	0.0	10.8	0.0	0.0	22.9	30.2			
Lane LOS	B			B			C	D			
Approach Delay (s)	0.0			0.0			22.9	30.2			
Approach LOS				C			C	D			
Intersection Summary											
Average Delay	0.2										
Intersection Capacity Utilization	44.9%										
ICU Level of Service	A										
Analysis Period (min)	15										

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
6: Maple Road & North Forest Road

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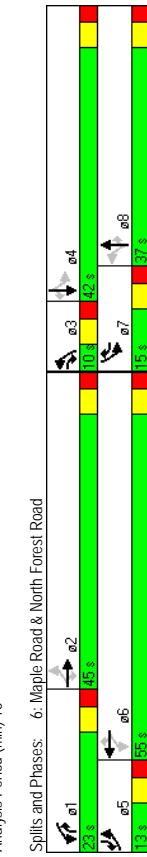
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	92	826	77	261	936	90	234	187	123	380	219
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	415	220	315	220	315	150	125	220	250	250	250
Storage Lanes	1	1	1	1	1	1	1	1	1	1	1
Taper Length (ft)	90	115	60	25	95	25	95	25	90	90	25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Flt Permitted	0.950	0.850	0.950	0.850	0.950	0.850	0.950	0.850	0.950	0.850	0.850
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1863	1583	1770	1863
Flt Permitted	0.185	0.101	0.179	0.179	0.101	0.179	0.179	0.1863	0.1583	0.1770	0.1863
Satd. Flow (perm)	345	3539	1583	188	3539	1583	333	1863	1583	665	1863
Right Turn on Red	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes
Satd. Flow (RTOR)	86	86	86	45	45	35	35	56	56	35	35
Link Speed (mph)	1705	820	12.4	10.3	11.8	11.8	11.8	11.8	11.8	11.8	11.8
Link Distance (ft)	25.8	12.4	10.3	10.3	11.8	11.8	11.8	11.8	11.8	11.8	11.8
Travel Time (s)	0.90	0.90	0.95	0.95	0.90	0.90	0.90	0.90	0.90	0.80	0.80
Peak Hour Factor	1.02	0.918	0.86	0.95	0.95	0.95	1.00	0.90	0.90	0.80	0.80
Adj. Flow (vph)	102	918	86	275	985	95	100	260	208	154	475
Shared Lane Traffic (%)	102	918	86	275	985	95	100	260	208	154	475
Lane Group Flow (vph)	No	No	No	No	No	No	No	No	No	No	No
Enter Blocked Intersection	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Median Width (ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset (ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width (ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	2	1	2	1	2	1	1	2
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru
Leading Detector (ft)	20	100	20	100	20	100	20	100	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size (ft)	20	6	20	20	6	20	20	6	20	20	6
Detector 1 Type	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 1 Channel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position (ft)	94	94	94	94	94	94	94	94	94	94	94
Detector 2 Size (ft)	6	6	6	6	6	6	6	6	6	6	6
Detector 2 Type	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 2 Channel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Extend (s)	5	2	3	1	6	7	3	8	1	7	4
Turn Type	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+ov
Protected Phases	5	2	3	1	6	7	3	8	1	7	4
Permitted Phases	2	2	2	6	6	6	8	8	4	4	4
Detector Phase	5	2	3	1	6	7	3	8	1	7	4

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
6: Maple Road & North Forest Road

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Minimum Initial (s)	1.0	4.0	1.0	1.0	4.0	1.0	1.0	4.0	1.0	1.0	4.0
Minimum Split (s)	7.0	35.0	7.0	7.0	35.0	7.0	7.0	35.0	7.0	7.0	35.0
Total Split (s)	13.0	45.0	10.0	23.0	55.0	15.0	10.0	37.0	23.0	15.0	42.0
Total Split (%)	10.8%	37.5%	8.3%	19.2%	45.8%	12.5%	8.3%	30.8%	19.2%	12.5%	35.0%
Maximum Green (s)	7.0	39.0	4.0	17.0	49.0	9.0	4.0	31.0	17.0	9.0	36.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0	0	0	0
Act Effct Green (s)	40.6	33.7	43.9	55.3	42.4	57.4	30.8	26.7	48.5	40.4	31.5
Actuated g/C Ratio	0.37	0.31	0.40	0.51	0.39	0.52	0.28	0.24	0.44	0.37	0.29
v/c Ratio	0.47	0.84	0.13	0.85	0.72	0.11	0.68	0.57	0.28	0.46	0.88
Control Delay	23.6	44.0	5.2	52.4	32.0	14.2	52.1	42.8	15.5	29.1	57.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.6	44.0	5.2	52.4	32.0	14.2	52.1	42.8	15.5	29.1	57.4
LOS	C	D	A	D	C	B	D	D	B	C	E
Approach Delay	39.1	D	A	D	C	B	D	D	B	C	E
Approach LOS	D	D	A	D	C	B	D	D	B	C	E
Intersection Summary	Other										
Area Type:	Other										
Cycle Length:	120										
Actuated Cycle Length:	109.4										
Natural Cycle:	85										
Control Type:	Actuated-Uncoordinated										
Maximum v/c Ratio:	0.88										
Intersection Signal Delay:	37.5										
Intersection Capacity Utilization:	82.3%										
Analysis Period (min):	15										



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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
7: Sheridan Drive & Mill Street

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	8	1316	125	220	1187	9	111	21	125	30	146
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	100	0	150	0	150	0	40	0	75	0	75
Storage Length (ft)	1	0	1	0	1	0	1	0	1	0	1
Storage Lanes	65	25	60	25	60	25	25	25	25	25	25
Taper Length (ft)	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.987		0.999		0.999		0.872		0.950		0.977
Flt Protected	0.950		0.950		0.950		0.950		0.950		0.950
Satd. Flow (prot)	1770	3493	0	1770	3536	0	1770	1624	0	1770	1820
Flt Permitted	0.159		0.080		0.219		0.598		0.598		0.598
Satd. Flow (perm)	296	3493	0	149	3536	0	408	1624	0	1114	1820
Right Turn on Red		No		Yes		Yes		No		No	Yes
Satd. Flow (RTOR)				1							7
Link Speed (mph)	45		45		45		30		30		30
Link Distance (ft)	2782		977		362		838		362		362
Travel Time (s)	42.2		14.8		19.0		19.0		19.0		8.2
Peak Hour Factor	0.86	0.86	0.89	0.89	0.89	0.89	0.56	0.56	0.56	0.61	0.61
Adj. Flow (vph)	9	1530	145	247	1334	10	198	38	223	49	239
Shared Lane Traffic (%)											44
Lane Group Flow (vph)	9	1675	0	247	1344	0	198	261	0	49	283
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Right	Right
Median Width(ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset(ft)	0		0		0		0		0		0
Crosswalk Width(ft)	16		16		16		16		16		16
Two way Left Turn Lane	Yes		Yes		Yes		Yes		Yes		Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9	15	9	15	9	15
Number of Detectors	1	2	1	2	1	2	1	2	1	2	1
Detector Template	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left
Leading Detector (ft)	20	100	20	100	20	100	20	100	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	6	20	6	20	6	20	6	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94	0.0	94	0.0	94	0.0	94	0.0	94	0.0	94
Detector 2 Size(ft)	6	6	6	6	6	6	6	6	6	6	6
Detector 2 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 2 Channel											
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm		pm+pt		pm+pt		pm+pt		Perm		Perm
Protected Phases	2	2	6	1	6	3	8	8	4	4	4
Permitted Phases	2	2	6	1	6	3	8	8	4	4	4
Detector Phase	2	2	6	1	6	3	8	8	4	4	4

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
7: Sheridan Drive & Mill Street

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase	4.0	4.0	1.0	4.0	4.0	1.0	4.0	4.0	4.0	4.0	4.0
Minimum Initial (s)	28.3	28.3	6.2	28.3	6.2	28.3	6.2	34.2	34.2	34.2	34.2
Minimum Split (s)	50.0	50.0	0.0	20.0	70.0	0.0	25.0	65.0	0.0	40.0	40.0
Total Split (s)	37.0%	37.0%	0.0%	14.8%	51.9%	0.0%	18.5%	48.1%	0.0%	29.6%	29.6%
Total Split (%)	44.5	44.5	15.7	64.5	19.8	59.8	34.8	34.8	34.8	34.8	34.8
Maximum Green (s)	4.3	4.3	3.2	4.3	3.2	4.3	3.2	3.2	3.2	3.2	3.2
Yellow Time (s)	1.2	1.2	1.1	1.2	1.1	1.2	2.0	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	5.5	5.5	4.0	4.3	5.5	4.0	5.2	5.2	4.0	5.2	5.2
Total Lost Time (s)	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead/Lag	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Lead-Lag Optimize?	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Vehicle Extension (s)	Max	Max	None	Max	None	Max	None	None	None	None	None
Recall Mode	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Walk Time (s)	15.0	15.0	15.0	15.0	15.0	15.0	22.0	22.0	22.0	22.0	22.0
Flash Dont Walk (s)	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Calls (#/hr)	45.4	45.4	66.2	65.0	43.4	43.4	43.4	43.4	23.3	23.3	23.3
Act Effct Green (s)	0.38	0.38	0.56	0.55	0.36	0.36	0.36	0.36	0.20	0.20	0.20
Actuated g/C Ratio	0.08	1.26	0.85	0.70	0.62	0.44	0.62	0.44	0.22	0.22	0.22
v/c Ratio	31.2	155.1	56.6	23.9	35.4	30.5	35.4	30.5	42.8	42.8	42.8
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	31.2	155.1	56.6	23.9	35.4	30.5	35.4	30.5	42.8	42.8	42.8
Total Delay	C	F	E	C	D	C	D	C	D	E	E
LOS	154.5	F	29.0	C	32.6	C	57.4	C	57.4	C	57.4
Approach Delay											
Approach LOS											

Intersection Summary

Area Type:	Other
Cycle Length:	135
Actuated Cycle Length:	119.1
Natural Cycle:	150
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	1.26
Intersection Signal Delay:	83.7
Intersection Capacity Utilization:	84.9%
Analysis Period (min):	15



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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
8: Sheridan Drive & North Forest Road

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	90	1306	205	181	1248	31	279	852	23	41	447
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	405	170	260	0	180	0	265	180	200	200	200
Storage Lanes	1	1	1	0	1	0	1	1	1	1	1
Taper Length (ft)	200	25	200	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95
Flt Protected	0.950		0.850		0.996		0.850		0.850		0.850
Satd. Flow (prot)	1770	3539	1583	1770	3525	0	1770	1863	1583	1770	3539
Flt Permitted	0.073		0.067		0.177		0.391		0.391		0.391
Satd. Flow (perm)	136	3539	1583	125	3525	0	330	1863	1583	728	3539
Right Turn on Red	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Satd. Flow (RTOR)	98		98		2		26		26		310
Link Speed (mph)	45		45		45		40		40		35
Link Distance (ft)	903		2219		33.6		547		354		6.9
Travel Time (s)	13.7		33.6		9.3		9.3		6.9		6.9
Peak Hour Factor	0.95	0.95	0.95	0.92	0.92	0.92	0.90	0.90	0.90	0.84	0.84
Adj. Flow (vph)	95	1375	216	197	1357	34	310	391	26	49	532
Shared Lane Traffic (%)											
Lane Group Flow (vph)	95	1375	216	197	1391	0	310	391	26	49	532
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Right	Right
Median Width (ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset (ft)	0		0		0		0		0		0
Crosswalk Width (ft)	16		16		16		16		16		16
Two way Left Turn Lane	Yes		Yes		Yes		Yes		Yes		Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	1	2	9	15	9	15	15	9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru
Leading Detector (ft)	20	100	20	20	100	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size (ft)	20	6	20	20	6	20	6	20	20	6	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position (ft)	94		94		94		94		94		94
Detector 2 Size (ft)	6		6		6		6		6		6
Detector 2 Type	CI+EX		CI+EX		CI+EX		CI+EX		CI+EX		CI+EX
Detector 2 Channel											
Detector 2 Extend (s)	0.0		0.0		0.0		0.0		0.0		0.0
Turn Type	pm+pt	Perm	pm+pt	pm+pt	Perm	pm+pt	Perm	pm+pt	Perm	pm+pt	Perm
Protected Phases	1	6	5	2	7	4	3	8			
Permitted Phases	6	6	6	2	4	4	4	8	8	8	8
Detector Phase	1	6	6	5	2	7	4	4	4	3	8

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
8: Sheridan Drive & North Forest Road

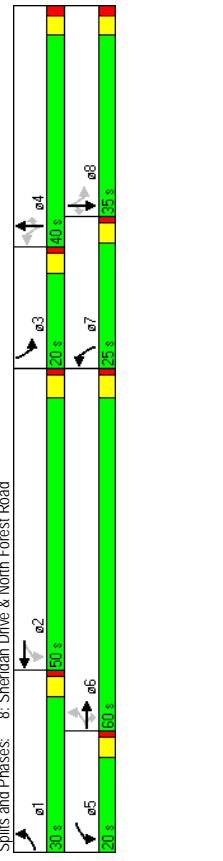
4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.3	27.9	27.9	8.3	27.9	8.3	27.9	27.9	8.3	27.9	27.9
Total Split (s)	30.0	60.0	60.0	20.0	50.0	0.0	25.0	40.0	40.0	20.0	35.0
Total Split (%)	21.4%	42.9%	42.9%	14.3%	35.7%	0.0%	17.9%	28.6%	28.6%	14.3%	25.0%
Maximum Green (s)	25.7	54.9	54.9	15.7	44.9	20.7	34.9	34.9	15.7	29.9	29.9
Yellow Time (s)	3.2	3.9	3.9	3.2	3.9	3.2	3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.1	1.2	1.1	1.2	1.1	1.2	1.1	1.1	1.1	1.1	1.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.3	5.1	5.1	4.3	5.1	4.0	4.3	5.1	5.1	4.3	5.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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
Recall Mode	None	Max	None	Max	None	Max	None	None	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0	0	0	0
Act Effct Green (s)	65.1	55.0	55.0	73.9	60.0	52.0	41.2	41.2	41.2	34.8	26.2
Actuated g/C Ratio	0.48	0.41	0.41	0.55	0.44	0.39	0.31	0.31	0.26	0.19	0.19
v/c Ratio	0.54	0.95	0.31	0.82	0.89	0.89	0.69	0.69	0.05	0.20	0.77
Control Delay	32.0	54.1	16.4	59.0	43.2	60.4	49.8	12.5	29.3	60.0	12.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.0	54.1	16.4	59.0	43.2	60.4	49.8	12.5	29.3	60.0	12.0
LOS	C	D	B	E	D	E	D	D	B	C	E
Approach Delay	48.0		45.1		45.1		53.0		D		D
Approach LOS	D		D		D		D		D		D

Intersection Summary

Area Type:	Other
Cycle Length:	140
Actuated Cycle Length:	134.9
Natural Cycle:	105
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.95
Intersection Signal Delay:	46.4
Intersection Capacity Utilization:	89.6%
Analysis Period (min):	15

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
9: Proposed Access Road & North Forest Road

4/24/2014



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			4		
Volume (vph)	8	40	25	442	731	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fit	0.888			0.994		
Flt Protected	0.991			0.997		
Satd. Flow (prot)	1639	0	0	1857	1852	0
Flt Permitted	0.991			0.997		
Satd. Flow (perm)	1639	0	0	1857	1852	0
Link Speed (mph)	30			35	35	
Link Distance (ft)	280			310	143	
Travel Time (s)	6.4			6.0	2.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	9	43	27	480	795	40
Shared Lane Traffic (%)						
Lane Group Flow (vph)	52	0	0	507	835	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	Free	Free	9
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	53.7%					
Analysis Period (min)	15					
	ICU Level of Service A					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
9: Proposed Access Road & North Forest Road

4/24/2014



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			4		
Volume (veh/h)	8	40	25	442	731	37
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	9	43	27	480	795	40
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)				664		
pX, platoon unblocked	0.81					
vC, conflicting volume	1349	815	835			
vC1, stage 1 cont vol						
vC2, stage 2 cont vol						
vCu, unblocked vol	1314	815	835			
IC, single (s)	6.4	6.2	4.1			
IC, 2 stage (s)						
IF (s)	3.5	3.3	2.2			
p0 queue free %	94	88	97			
cM capacity (veh/h)	137	378	799			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	52	508	835			
Volume Left	9	27	0			
Volume Right	43	0	40			
cSH	292	799	1700			
Volume to Capacity	0.18	0.03	0.49			
Queue Length 95th (ft)	16	3	0			
Control Delay (s)	200	1.0	0.0			
Lane LOS	C	A				
Approach Delay (s)	200	1.0	0.0			
Approach LOS	C					
Intersection Summary						
Average Delay	1.1					
Intersection Capacity Utilization	53.7%					
ICU Level of Service	A					
Analysis Period (min)	15					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
10: Sheridan Drive & Proposed Access Driveway

4/24/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	246	1638	6	4	1513	123	16	0	9	8	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	350	0	75	0	0	0	0	0	0	0	0
Storage Lanes	1	0	1	0	0	0	0	0	0	0	1
Taper Length (ft)	25	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Flt	0.950	0.999	0.950	0.989	0.950	0.951	0.969	0.950	0.950	0.950	0.850
Flt Protected	1770	3536	0	1770	3500	0	0	1717	0	0	1770
Satd. Flow (prot)	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950
Flt Permitted	1770	3536	0	1770	3500	0	0	1717	0	0	1770
Satd. Flow (perm)	45	45	45	45	45	30	30	30	30	30	30
Link Speed (mph)	635	635	635	765	765	278	235	235	235	235	235
Link Distance (ft)	9.6	11.6	11.6	16	16	16	16	16	16	16	16
Travel Time (s)	0.88	0.88	0.88	0.90	0.90	0.69	0.69	0.69	0.69	0.92	0.92
Adj. Flow (vph)	280	1861	7	4	1681	137	23	0	13	9	0
Shared Lane Traffic (%)	280	1868	0	4	1818	0	0	36	0	0	9
Lane Group Flow (vph)	No	No	No	No	No	No	No	No	No	No	No
Enter Blocked Intersection	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left
Lane Alignment	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left
Median Width (ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset (ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width (ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9	15	9	15	9	15
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free
Intersection Summary											
Area Type:	Other										
Control Type:	Unsignalized										
Intersection Capacity Utilization	77.5%										
Analysis Period (min)	15										
ICU Level of Service:	D										

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
10: Sheridan Drive & Proposed Access Driveway

4/24/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (veh/h)	246	1638	6	4	1513	123	16	0	9	8	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.88	0.88	0.88	0.90	0.90	0.90	0.69	0.69	0.69	0.92	0.92
Hourly flow rate (vph)	280	1861	7	4	1681	137	23	0	13	9	0
Pedestrians											
Lane Width (ft)											
Walking Speed (ft/s)											
Percent Blockage											
Right turn flare (veh)											
Median type	TWLT	TWLT	TWLT	TWLT	TWLT	TWLT	TWLT	TWLT	TWLT	TWLT	TWLT
Median storage (veh)	2	2	2	2	2	2	2	2	2	2	2
Upstream signal (ft)	635	635	635	635	635	635	635	635	635	635	635
pX, platoon unblocked	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66
vC, conflicting volume	1818	1868	1868	1868	1868	1868	1868	1868	1868	1868	1868
vC1, stage 1 cont vol	2424	2424	2424	2424	2424	2424	2424	2424	2424	2424	2424
vC2, stage 2 cont vol	904	1827	1827	1827	1827	1827	1827	1827	1827	1827	1827
vCu, unblocked vol	1818	1288	1288	1288	1288	1288	1288	1288	1288	1288	1288
IC, single (s)	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
IC, 2 stage (s)	6.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
IF (s)	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
p0 queue free %	16	99	99	99	99	99	99	99	99	99	99
cM capacity (veh/h)	333	353	353	353	353	353	353	353	353	353	353
Direction, Lane #	EB1	EB2	EB3	WB1	WB2	WB3	NB1	SB1	SB2		
Volume Total	280	1241	627	4	1121	697	36	9	54		
Volume Left	280	0	0	4	0	0	23	9	0		
Volume Right	0	0	7	0	0	137	13	0	54		
cSH	333	1700	1700	353	1700	1700	1	31	278		
Volume to Capacity	0.84	0.73	0.37	0.01	0.66	0.41	62.36	0.28	0.20		
Queue Length 95th (ft)	185	0	0	1	0	0	Err	22	18		
Control Delay (s)	52.9	0.0	0.0	15.3	0.0	0.0	Err	162.6	21.1		
Lane LOS	F	C	C	C	C	C	F	F	C		
Approach Delay (s)	6.9	0.0	0.0	0.0	0.0	0.0	Err	40.6	E		
Approach LOS							F		E		
Intersection Summary											
Average Delay	93.3										
Intersection Capacity Utilization	77.5%										
ICU Level of Service	D										
Analysis Period (min)	15										

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
11: Sheridan Drive & Frankhauser Road

4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (vph)	149	1838	1555	24	51	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105	0	0	0	0	50
Storage Lanes	1	0	0	0	1	1
Taper Length (ft)	65	25	25	25	25	25
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Flt Protected	0.950	0.998			0.850	
Satd. Flow (prot)	1770	3539	3532	0	1770	1583
Flt Permitted	0.116				0.950	
Satd. Flow (perm)	216	3539	3532	0	1770	1583
Right Turn on Red		Yes			Yes	
Satd. Flow (RTOR)		2			6	
Link Speed (mph)	45	45	45	30	30	30
Link Distance (ft)	101.4	635	825	18.8	18.8	18.8
Travel Time (s)	15.4	9.6	18.8			
Peak Hour Factor	0.89	0.89	0.94	0.94	0.73	0.73
Adj. Flow (vph)	167	2065	1654	26	70	74
Shared Lane Traffic (%)						
Lane Group Flow (vph)	167	2065	1680	0	70	74
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Right
Median Width(ft)	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	2	2	9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Left	Right	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94	94	94			
Detector 2 Size(ft)	6	6	6			
Detector 2 Type	CI+EX	CI+EX	CI+EX			
Detector 2 Channel						
Detector 2 Extend (s)	0.0	0.0	0.0			
Turn Type	Perm				Perm	
Protected Phases		2	6	4		
Permitted Phases	2				4	
Detector Phase	2	2	6	4	4	4

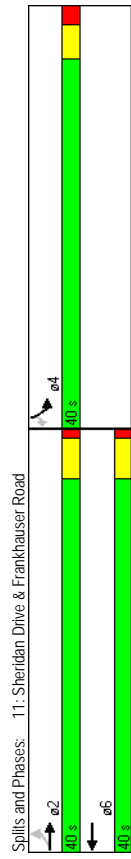
Lanes, Volumes, Timings
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
11: Sheridan Drive & Frankhauser Road

4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	1.0	1.0
Minimum Split (s)	40.0	40.0	40.0	40.0	31.1	31.1
Total Split (s)	40.0	40.0	40.0	40.0	40.0	40.0
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Maximum Green (s)	35.2	35.2	35.2	34.9	34.9	34.9
Yellow Time (s)	3.9	3.9	3.9	3.2	3.2	3.2
All-Red Time (s)	0.9	0.9	0.9	0.9	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.8	4.8	4.8	4.0	5.1	5.1
LeadLag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0	15.0	15.0	19.0	19.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effct Green (s)	64.3	64.3	64.3	8.9	8.9	8.9
Actuated g/C Ratio	0.80	0.80	0.80	0.11	0.11	0.11
v/c Ratio	0.96	0.73	0.59	0.36	0.41	0.41
Control Delay	78.1	7.4	5.3	36.9	36.8	36.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	78.1	7.4	5.3	36.9	36.8	36.8
LOS	E	A	A	D	D	D
Approach Delay		12.7	5.3		36.8	
Approach LOS		B	A		D	
Intersection Summary						
Area Type:	Other					
Cycle Length:	80					
Actuated Cycle Length:	80					
Offset:	76 (95%), Referenced to phase 2:EBTL and 6:WBT, Start of Green					
Natural Cycle:	150					
Control Type:	Actuated-Coordinated					
Maximum v/c Ratio:	0.96					
Intersection Signal Delay:	10.5					
Intersection Capacity Utilization:	67.6%					
Analysis Period (min):	15					



Lanes, Volumes, Timings
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
12: Sheridan Drive & I-290 NB

4/24/2014

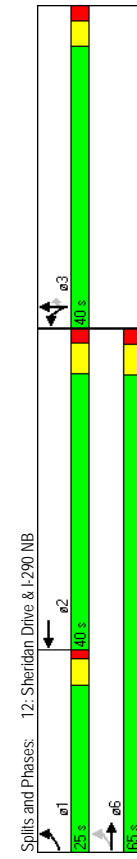
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	249	1741	0	0	1050	515	269	0	281	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	0	0	230	0	0	0	120	0	0
Storage Lanes	1	0	0	0	1	0	0	0	1	0	0
Taper Length (ft)	105	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	0.95	0.91	0.95	1.00	1.00
Flt	0.950				0.951		0.914		0.850		
Flt Protected	0.950				0.950	0.979					
Satd. Flow (prot)	1770	5085	0	0	4836	0	1681	1517	1504	0	0
Flt Permitted	0.084				0.950	0.979					
Satd. Flow (perm)	156	5085	0	0	4836	0	1681	1517	1504	0	0
Right Turn on Red		Yes			Yes				Yes		Yes
Satd. Flow (RTOR)		45			125				12		12
Link Speed (mph)		45			45				30		30
Link Distance (ft)		197			193				830		423
Travel Time (s)		3.0			2.9				18.9		9.6
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.88	0.88	0.88	0.92	0.92
Adj. Flow (vph)	245	1852	0	0	1117	548	306	0	319	0	0
Shared Lane Traffic (%)							29%		38%		
Lane Group Flow (vph)	265	1852	0	0	1665	0	217	210	198	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Left	Right	Left	Right
Median Width (ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset (ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width (ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane											
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	15	9	15	15	15	9	15	9
Number of Detectors	1	2			2		1	2	1		1
Detector Template	Left	Thru			Thru		Left	Thru	Right		
Leading Detector (ft)	20	100			100		20	100	20		
Trailing Detector (ft)	0	0			0		0	0	0		
Detector 1 Position (ft)	0	0			0		0	0	0		
Detector 1 Size (ft)	20	6			6		20	6	20		
Detector 1 Type	CI+EX	CI+EX			CI+EX		CI+EX	CI+EX	CI+EX		
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0	0.0		
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0	0.0		
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0	0.0		
Detector 2 Position (ft)	94				94				94		
Detector 2 Size (ft)	6				6				6		
Detector 2 Type	CI+EX				CI+EX				CI+EX		
Detector 2 Channel											
Detector 2 Extend (s)	0.0				0.0				0.0		
Turn Type	pn+pt				custom				Perm		
Protected Phases	1	6			2		3	3	3		
Permitted Phases	6				3		3	3	3		
Detector Phase	1	6			2		3	3	3		

Lanes, Volumes, Timings
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
12: Sheridan Drive & I-290 NB

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	1.0	4.0			4.0		4.0	4.0	4.0		4.0
Minimum Split (s)	6.2	33.9			27.8		29.0	29.0	29.0		29.0
Total Split (s)	25.0	65.0	0.0	0.0	40.0	0.0	40.0	40.0	40.0	0.0	0.0
Total Split (%)	23.8%	61.9%	0.0%	0.0%	38.1%	0.0%	38.1%	38.1%	38.1%	0.0%	0.0%
Maximum Green (s)	20.7	59.1			34.2		34.8	34.8	34.8		34.8
Yellow Time (s)	3.2	3.9			3.9		3.2	3.2	3.2		3.2
All-Red Time (s)	1.1	2.0			1.9		2.0	2.0	2.0		2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.3	5.9	4.0	4.0	5.8	4.0	5.2	5.2	5.2	4.0	4.0
Lead/Lag	Lead	Lag			Lag						
Vehicle Extension (s)	2.0	3.0			3.0		2.0	2.0	2.0		2.0
Recall Mode	None	C-Max			C-Max		None	None	None		None
Walk Time (s)	7.0				7.0						
Flash Dont Walk (s)	21.0				15.0						
Pedestrian Calls (#/hr)	0				0						
Act Effct Green (s)	76.4	74.8			56.9		19.1	19.1	19.1		19.1
Actuated g/C Ratio	0.73	0.71			0.54		0.18	0.18	0.18		0.18
v/c Ratio	0.82	0.51			0.62		0.71	0.73	0.70		0.70
Control Delay	41.1	8.2			18.7		52.2	52.4	49.9		49.9
Queue Delay	0.0	0.2			0.0		0.0	0.0	0.0		0.0
Total Delay	41.1	8.4			18.7		52.2	52.4	49.9		49.9
LOS	D	A			B		D	D	D		D
Approach Delay		12.5			18.7						
Approach LOS		B			B						



Spills and Phases: 12: Sheridan Drive & I-290 NB
Alternative 4
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
13: Sheridan Drive & Harlem Road

4/24/2014

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔↔	↔↔	↔↔	↔↔	↔↔
Volume (vph)	1003	315	484	835	285	987
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	215	0	140	0	0
Storage Lanes	1	1	1	2	2	2
Taper Length (ft)	230	100	100	100	25	25
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	0.88
Flt Protected	0.850					0.850
Satd. Flow (prot)	3539	1583	3433	3539	3433	2787
Flt Permitted	0.950					0.950
Satd. Flow (perm)	3539	1583	3433	3539	3433	2787
Right Turn on Red	No					Yes
Satd. Flow (RTOR)	45					78
Link Speed (mph)	45					35
Link Distance (ft)	314					338
Travel Time (s)	4.8					6.3
Peak Hour Factor	0.85	0.85	0.92	0.92	0.90	0.90
Adj. Flow (vph)	1180	371	526	908	317	1097
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1180	371	526	908	317	1097
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Right	Right
Median Width(ft)	12	24	24	24	24	24
Link Offset(ft)	0	0	0	0	0	0
Crosswalk Width(ft)	16					16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15				15
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (ft)	100	20	20	100	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	6	20	20	6	20	20
Detector 1 Type	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94					94
Detector 2 Size(ft)	6					6
Detector 2 Type	Ch+Ex					Ch+Ex
Detector 2 Channel						
Detector 2 Extend (s)	0.0					0.0
Turn Type		pm+ov	Prot			pm+ov
Protected Phases	2	3	1	6	3	1
Permitted Phases	2	3	1	6	3	1
Detector Phase	2	3	1	6	3	1

Lanes, Volumes, Timings
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
13: Sheridan Drive & Harlem Road

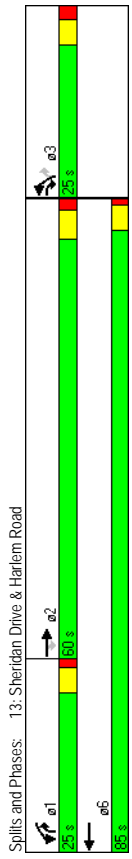
4/24/2014

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Switch Phase	→	→	←	←	←	←
Minimum Initial (s)	1.0	1.0	1.0	4.0	1.0	1.0
Minimum Split (s)	30.5	6.2	5.3	32.3	6.2	5.3
Total Split (s)	60.0	25.0	25.0	85.0	25.0	25.0
Total Split (%)	54.5%	22.7%	22.7%	77.3%	22.7%	22.7%
Maximum Green (s)	54.5	19.8	20.7	80.7	19.8	20.7
Yellow Time (s)	3.9	3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.6	2.0	1.1	1.1	2.0	1.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.2	4.3	4.3	5.2	4.3
Lead/Lag	Lag	Lead	Lead	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	C-Max	None	None	None	None	None
Walk Time (s)	7.0			7.0		
Flash Dont Walk (s)	18.0			21.0		
Pedestrian Calls (#/hr)	0			0		
Act Effct Green (s)	55.0	74.9	25.6	86.0	14.5	45.2
Actuated g/C Ratio	0.50	0.68	0.23	0.78	0.13	0.41
v/c Ratio	0.67	0.34	0.66	0.33	0.70	0.92
Control Delay	23.1	8.1	43.5	4.1	54.1	41.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.1	8.1	43.5	4.1	54.1	41.8
LOS	C	A	D	A	D	D
Approach Delay	19.5			18.5		44.6
Approach LOS	B			B		D

Intersection Summary

Area Type:	Other
Cycle Length:	110
Actuated Cycle Length:	110
Offset:	24 (22%), Referenced to phase 2:EBT, Start of Green
Natural Cycle:	65
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.92
Intersection Signal Delay:	27.3
Intersection Capacity Utilization:	70.4%
Analysis Period (min):	15
Intersection LOS:	C
ICU Level of Service:	C

Lanes, Volumes, Timings
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
14: I-290 SB & Harlem Road

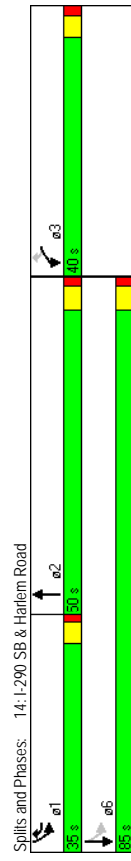
4/24/2014

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (vph)	298	804	507	21	391	377
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	0	0	330	0
Storage Lanes	1	1	0	0	1	0
Taper Length (ft)	25	25	25	25	75	25
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	3518	0	1770	3539
Flt Permitted	0.950				0.197	
Satd. Flow (perm)	1770	1583	3518	0	367	3539
Right Turn on Red	Yes	Yes	Yes	Yes	Yes	Yes
Satd. Flow (RTOR)	129	4				
Link Speed (mph)	30	35	35	35	35	35
Link Distance (ft)	333	250	456	456	456	456
Travel Time (s)	7.6	4.9	8.9	8.9	8.9	8.9
Peak Hour Factor	0.81	0.81	0.87	0.87	0.88	0.88
Adj. Flow (vph)	368	993	583	24	444	428
Shared Lane Traffic (%)						
Lane Group Flow (vph)	368	993	607	0	444	428
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width (ft)	12	12	12	12	12	12
Link Offset (ft)	0	0	0	0	0	0
Crosswalk Width (ft)	16	16	16	16	16	16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	9	9	15	15
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Left	Thru	Thru
Leading Detector (ft)	20	20	100	20	100	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position (ft)	0	0	0	0	0	0
Detector 1 Size (ft)	20	20	6	20	6	6
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position (ft)						
Detector 2 Size (ft)						
Detector 2 Type						
Detector 2 Channel						
Detector 2 Extend (s)						
Turn Type		pm+ov			pm+pl	
Protected Phases	3	1	2	1	1	6
Permitted Phases	3	1	2	1	2	6
Detector Phase	3	1	2	1	2	6

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
14: I-290 SB & Harlem Road

4/24/2014

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	9.2	30.6	9.2	21.0	21.0
Total Split (s)	40.0	35.0	50.0	0.0	35.0	85.0
Total Split (%)	32.0%	28.0%	40.0%	0.0%	28.0%	68.0%
Maximum Green (s)	35.2	30.7	45.0	30.7	80.0	80.0
Yellow Time (s)	3.2	3.2	3.6	3.2	3.6	3.6
All-Red Time (s)	1.6	1.1	1.4	1.1	1.4	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.8	4.3	5.0	4.0	4.3	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Min	None	None	None
Walk Time (s)			10.0			
Flash Dont Walk (s)			15.0			
Pedestrian Calls (#/hr)			0			
Act Effct Green (s)	24.2	60.3	22.3	58.6	57.9	57.9
Actuated g/C Ratio	0.26	0.65	0.24	0.64	0.63	0.63
v/c Ratio	0.79	0.92	0.71	0.63	0.19	0.19
Control Delay	45.1	27.9	37.2	18.5	8.2	8.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.1	27.9	37.2	18.5	8.2	8.2
LOS	D	C	D	B	A	A
Approach Delay	32.6	37.2	D	D	13.5	B
Approach LOS	C	D	D	D	B	B



Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
15: Maple Road & Proposed North Driveway

4/24/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔↔	↔↔	↔↔	↔↔	↔↔
Volume (vph)	977	184	246	1007	38	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	225	0	0	150	0
Storage Lanes	0	1	0	1	1	1
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Flt Protected	0.976		0.950		0.950	0.850
Satd. Flow (prot)	3454	0	1770	3539	1770	1583
Flt Permitted	0.950		0.950		0.950	0.950
Satd. Flow (perm)	3454	0	1770	3539	1770	1583
Link Speed (mph)	45		45		30	
Link Distance (ft)	1002		926		372	
Travel Time (s)	15.2		14.0		8.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1062	200	267	1095	41	54
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1262	0	267	1095	41	54
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12		12		12	
Link Offset(ft)	0		0		0	
Crosswalk Width(ft)	16		16		16	
Two way Left Turn Lane	Yes		Yes		Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15	15	15	15	9
Sign Control	Free	Free	Free	Free	Stop	Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	59.8%					
Analysis Period (min)	15					
ICU Level of Service:	B					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
15: Maple Road & Proposed North Driveway

4/24/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔↔	↔↔	↔↔	↔↔	↔↔
Volume (veh/h)	977	184	246	1007	38	50
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%		0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1062	200	267	1095	41	54
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						6
Median type				TWLT		
Median storage (veh)	2			2		
Upstream signal (ft)						
pX, platoon unblocked						631
vC, conflicting volume			1262		2244	
vC1, stage 1 conf vol					1162	
vC2, stage 2 conf vol					1082	
vCu, unblocked vol			1262		2244	631
IC, single (s)			4.1		6.8	6.9
IC, 2 stage (s)					5.8	
IF (s)			2.2		3.5	3.3
p0 queue free %			51		67	87
cM capacity (veh/h)			547		123	424
Direction, Lane #						
	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	708	554	267	547	547	96
Volume Left	0	0	267	0	0	41
Volume Right	0	200	0	0	0	54
cSH	1700	1700	547	1700	1700	286
Volume to Capacity	0.42	0.33	0.49	0.32	0.32	0.33
Queue Length 95th (ft)	0	0	67	0	0	36
Control Delay (s)	0.0	0.0	17.7	0.0	0.0	29.2
Lane LOS			C			D
Approach Delay (s)	0.0		3.5			29.2
Approach LOS			D			D
Intersection Summary						
Average Delay	2.8					
Intersection Capacity Utilization	59.8%					
ICU Level of Service	B					
Analysis Period (min)	15					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
17: Proposed Access Road & Frankhauser Road

4/24/2014

	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Volume (vph)	38	0	50	123	0	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fit	0.950		0.904			
Fit Protected						
Satd. Flow (prot)	1770	0	1684	0	0	1863
Fit Permitted	0.950					
Satd. Flow (perm)	1770	0	1684	0	0	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	200		825			244
Travel Time (s)	4.5		18.8			5.5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	41	0	54	134	0	73
Shared Lane Traffic (%)						
Lane Group Flow (vph)	41	0	188	0	0	73
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	9	9	15	15
Sign Control	Stop	Free	Free	Free	Free	Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	20.2%					
Analysis Period (min)	15					
ICU Level of Service	A					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
17: Proposed Access Road & Frankhauser Road

4/24/2014

	WBL	WBR	NBT	NBR	SBL	SBT
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Volume (veh/h)	38	0	50	123	0	67
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	41	0	54	134	0	73
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)			825			
pX, platoon unblocked						
VC, conflicting volume	194	121				188
VC1, stage 1 cont vol						
VC2, stage 2 cont vol						
vCu, unblocked vol	194	121				188
IC, single (s)	6.4	6.2				4.1
IC, 2 stage (s)						
IF (s)	3.5	3.3				2.2
p0 queue free %	95	100				100
cM capacity (veh/h)	795	930				1386
Direction, Lane #						
	WB 1	NB 1	SB 1			
Volume Total	41	188	73			
Volume Left	41	0	0			
Volume Right	0	134	0			
cSH	795	1700	1386			
Volume to Capacity	0.05	0.11	0.00			
Queue Length 95th (ft)	4	0	0			
Control Delay (s)	9.8	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	9.8	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay	1.3					
Intersection Capacity Utilization	20.2%					
ICU Level of Service	A					
Analysis Period (min)	15					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
52: Sheridan Drive & Proposed Access Driveway

4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (vph)	61	1593	1627	184	8	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200	0	0	0	0	0
Storage Lanes	1	0	1	0	0	0
Taper Length (ft)	75	0	25	25	25	25
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Flt Protected	0.950	0.985	0.981	0.981		
Satd. Flow (prot)	1770	3539	3486	0	1678	0
Flt Permitted	0.950				0.981	
Satd. Flow (perm)	1770	3539	3486	0	1678	0
Link Speed (mph)	45	45	903	30		
Link Distance (ft)	765	903	432			
Travel Time (s)	11.6	13.7	98			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	66	1732	1768	200	9	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	66	1732	1968	0	23	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Right
Median Width (ft)	12	12	12	12		
Link Offset (ft)	0	0	0	0		
Crosswalk Width (ft)	16	16	16	16		
Two way Left Turn Lane	Yes	Yes				
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	Free	Free	Free	Stop	Stop
Sign Control	Free	Free	Free	Free	Stop	Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	60.8%					
Analysis Period (min)	15					
ICU Level of Service:	B					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
52: Sheridan Drive & Proposed Access Driveway

4/24/2014

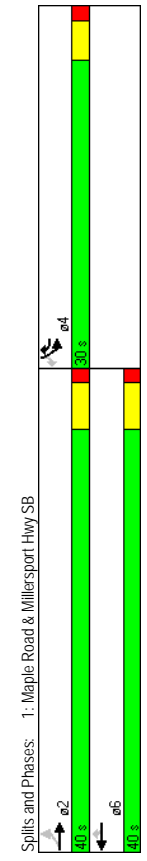
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (veh/h)	61	1593	1627	184	8	13
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	66	1732	1768	200	9	14
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLT	TWLT	TWLT	TWLT		
Median storage (veh)	2	2				
Upstream signal (ft)		903				
pX, platoon unblocked	0.63				0.63	0.63
vC, conflicting volume	1968				2867	984
vC1, stage 1 conf vol					1868	
vC2, stage 2 conf vol					998	
vCu, unblocked vol	1362				2789	0
IC, single (s)	4.1				6.8	6.9
IC, 2 stage (s)					5.8	
IF (s)	2.2				3.5	3.3
p0 queue free %	79				93	98
cM capacity (veh/h)	315				125	683
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	66	866	866	1179	789	23
Volume Left	66	0	0	0	0	9
Volume Right	0	0	0	0	200	14
cSH	315	1700	1700	1700	1700	253
Volume to Capacity	0.21	0.51	0.51	0.69	0.46	0.09
Queue Length 95th (ft)	19	0	0	0	0	7
Control Delay (s)	19.4	0.0	0.0	0.0	0.0	20.7
Lane LOS	C					C
Approach Delay (s)	0.7			0.0		20.7
Approach LOS				C		C
Intersection Summary						
Average Delay	0.5					
Intersection Capacity Utilization	60.8%					
ICU Level of Service	B					
Analysis Period (min)	15					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
 1: Maple Road & Millersport Hwy SB
 4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (vph)	29	962	989	227	59	174
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150			150	0	0
Storage Lanes	1			1	1	1
Taper Length (ft)	35			100	25	25
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Flt Protected	0.950			0.850	0.950	
Satd. Flow (prot)	1770	3539	3539	1583	1770	1583
Flt Permitted	0.237			0.950		
Satd. Flow (perm)	441	3539	3539	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)						61
Link Speed (mph)		45	45		30	
Link Distance (ft)		555	654		281	
Travel Time (s)		8.4	9.9		6.4	
Peak Hour Factor	0.90	0.90	0.92	0.92	0.81	0.81
Adj. Flow (vph)	32	1069	1075	247	73	215
Shared Lane Traffic (%)						
Lane Group Flow (vph)	32	1069	1075	247	73	215
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Right
Median Width(ft)	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16
Two way Left Turn Lane		Yes				
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94	94	94			
Detector 2 Size(ft)	6	6	6			
Detector 2 Type	Ch+Ex	Ch+Ex	Ch+Ex			
Detector 2 Channel						
Detector 2 Extend (s)	0.0	0.0	0.0			
Turn Type	Perm			pm+ov		Perm
Protected Phases		2	6	4	4	
Permitted Phases	2	2	6	6	4	4
Detector Phase	2	2	6	4	4	4

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
 1: Maple Road & Millersport Hwy SB
 4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	1.0	1.0	1.0
Minimum Split (s)	9.1	9.1	9.1	6.2	6.2	6.2
Total Split (s)	40.0	40.0	40.0	30.0	30.0	30.0
Total Split (%)	57.1%	57.1%	57.1%	42.9%	42.9%	42.9%
Maximum Green (s)	34.9	34.9	34.9	25.4	25.4	25.4
Yellow Time (s)	3.9	3.9	3.9	3.2	3.2	3.2
All-Red Time (s)	1.2	1.2	1.2	1.4	1.4	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	4.6	4.6	4.6
Lead-Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Min	C-Min	C-Min	None	None	None
Act Effct Green (s)	47.7	47.7	47.7	70.0	12.6	12.6
Actuated g/C Ratio	0.68	0.68	0.68	1.00	0.18	0.18
v/c Ratio	0.11	0.44	0.45	0.16	0.23	0.64
Control Delay	6.4	6.5	10.3	0.1	24.2	27.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.4	6.5	10.3	0.1	24.2	27.0
LOS	A	A	B	A	C	C
Approach Delay		6.5	8.4		26.3	
Approach LOS		A	A		C	
Intersection Summary						
Area Type:	Other					
Cycle Length:	70					
Actuated Cycle Length:	70					
Offset:	5 (7%), Referenced to phase 2:EBTL and 6:WBT. Start of Green					
Natural Cycle:	40					
Control Type:	Actuated-Coordinated					
Maximum v/c Ratio:	0.64					
Intersection Signal Delay:	9.6					
Intersection LOS:	A					
Intersection Capacity Utilization:	46.2%					
Analysis Period (min):	15					



Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
2: Maple Road & Millersport Hwy NB

4/24/2014

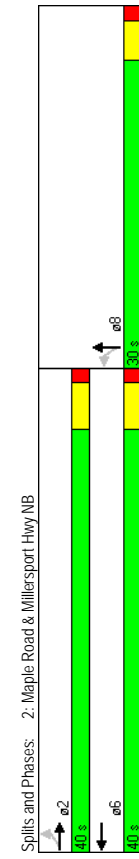
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	97	924	0	0	1124	47	91	0	462	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	0	0	0	0	0	0	0	0	0
Storage Lanes	1	0	0	0	0	1	0	0	0	0	0
Taper Length (ft)	50	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.950				0.994		0.850				
Satd. Flow (prot)	1770	3539	0	0	3518	0	1770	1583	0	0	0
Flt Permitted	0.111				0.950		0.950				
Right Turn on Red	207	3539	0	0	3518	0	1770	1583	0	0	0
Satd. Flow (RTOR)			Yes		8	Yes	72	Yes			Yes
Link Speed (mph)	45				45		30				30
Link Distance (ft)	654				1770		319				263
Travel Time (s)	9.9				26.8		7.3				6.0
Peak Hour Factor	0.91	0.91	0.87	0.87	0.87	0.84	0.84	0.84	0.84	0.92	0.92
Adj. Flow (vph)	107	1015	0	0	1292	54	108	0	550	0	0
Shared Lane Traffic (%)											
Lane Group Flow (vph)	107	1015	0	0	1346	0	108	550	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane	Yes				Yes						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	15	9	15	15	9	15	15	9
Number of Detectors	1	2			2		1	2			
Detector Template	Left	Thru			Thru		Left	Thru			
Leading Detector (ft)	20	100			100		20	100			
Trailing Detector (ft)	0	0			0		0	0			
Detector 1 Position(ft)	0	0			0		0	0			
Detector 1 Size(ft)	20	6			6		20	6			
Detector 1 Type	Ch+Ex	Ch+Ex			Ch+Ex		Ch+Ex	Ch+Ex			
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0			
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0			
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0			
Detector 2 Position(ft)	94				94		94				
Detector 2 Size(ft)	6				6		6				
Detector 2 Type	Ch+Ex				Ch+Ex		Ch+Ex				
Detector 2 Channel											
Detector 2 Extend (s)	0.0	0.0			0.0		0.0	0.0			
Turn Type	Perm				Perm		Perm				
Protected Phases	2				6		8				
Permitted Phases	2				6		8				
Detector Phase	2				6		8				

Lanes, Volumes, Timings
SRF & Associates
Alternative 4
Page 3

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
2: Maple Road & Millersport Hwy NB

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	1.0	1.0			4.0		1.0	1.0			
Minimum Split (s)	6.1	6.1			9.1		6.2	6.2			
Total Split (s)	40.0	40.0	0.0	0.0	40.0	0.0	30.0	30.0	0.0	0.0	0.0
Total Split (%)	57.1%	57.1%	0.0%	0.0%	57.1%	0.0%	42.9%	42.9%	0.0%	0.0%	0.0%
Maximum Green (s)	34.9	34.9			34.9		25.4	25.4			
Yellow Time (s)	3.9	3.9			3.9		3.2	3.2			
All-Red Time (s)	1.2	1.2			1.2		1.4	1.4			
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	4.0	4.0	5.1	4.0	4.6	4.6	4.0	4.0	4.0
Lead-Lag											
Lead-Lag Optimize?											
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0			
Recall Mode	C-Min	C-Min			C-Min		None	None			
Act Effct Green (s)	36.0	36.0			36.0		24.3	24.3			
Actuated g/C Ratio	0.51	0.51			0.51		0.35	0.35			
v/c Ratio	1.01	0.56			0.74		0.18	0.92			
Control Delay	112.8	11.7			16.8		16.2	42.8			
Queue Delay	0.0	0.0			0.0		0.0	0.0			
Total Delay	112.8	11.7			16.8		16.2	42.8			
LOS	F	B			B		B	D			
Approach Delay					16.8						
Approach LOS					B			D			
Intersection Summary											
Area Type:	Other										
Cycle Length:	70										
Actuated Cycle Length:	70										
Offset:	5 (7%), Referenced to phase 2:EBTL and 6:WBT, Start of Green										
Natural Cycle:	50										
Control Type:	Actuated-Coordinated										
Maximum v/c Ratio:	1.01										
Intersection Signal Delay:	23.0										
Intersection LOS:	C										
Intersection Capacity Utilization:	78.9%										
Analysis Period (min):	15										



Splits and Phases: 2: Maple Road & Millersport Hwy NB

Lanes, Volumes, Timings
SRF & Associates
Alternative 4
Page 4

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
3: Maple Road & Maplemere Road

4/24/2014

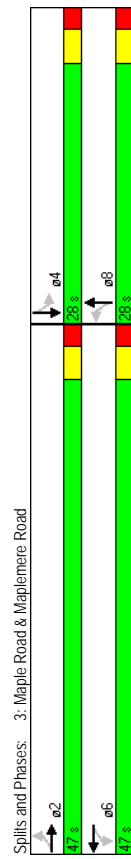
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	36	1248	35	21	1061	62	25	0	12	77	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	70	0	0	0	0	0	0	0	0
Storage Lanes	1	0	1	0	0	0	0	0	0	0	0
Taper Length (ft)	50	25	50	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Flt	0.996	0.950	0.992	0.957	0.967	0.964	0.964	0.964	0.964	0.964	0.964
Satd. Flow (prot)	1770	3525	0	1770	3511	0	1724	0	1724	0	1738
Satd. Flow (perm)	0.173	0.154	0.154	0.154	0.154	0.154	0.154	0.154	0.154	0.154	0.154
Right Turn on Red	322	3525	0	287	3511	0	1390	0	1372	0	1372
Satd. Flow (RTOR)	6	Yes	13	Yes	19	Yes	25	Yes	25	Yes	25
Link Speed (mph)	45	45	45	45	45	45	45	45	45	45	45
Link Distance (ft)	1770	1106	1106	378	402	402	402	402	402	402	402
Travel Time (s)	26.8	16.8	16.8	8.6	9.1	9.1	9.1	9.1	9.1	9.1	9.1
Peak Hour Factor	0.94	0.94	0.94	0.87	0.87	0.87	0.62	0.62	0.62	0.81	0.81
Adj. Flow (vph)	38	1328	37	24	1220	71	40	0	19	95	10
Shared Lane Traffic (%)	38	1365	0	24	1291	0	0	59	0	0	143
Lane Group Flow (vph)	No	No	No	No	No	No	No	No	No	No	No
Enter Blocked Intersection	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Right
Lane Alignment	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Right
Median Width (ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset (ft)	16	16	16	16	16	16	16	16	16	16	16
Crosswalk Width (ft)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9	15	9	15	9	15
Number of Detectors	1	2	1	2	1	2	1	2	1	2	2
Detector Template	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Thru
Leading Detector (ft)	20	100	20	100	20	100	20	100	20	100	100
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size (ft)	20	6	20	6	20	6	20	6	20	6	6
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position (ft)	94	94	94	94	94	94	94	94	94	94	94
Detector 2 Size (ft)	6	6	6	6	6	6	6	6	6	6	6
Detector 2 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 2 Channel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Extend (s)	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm
Turn Type	2	2	2	2	2	2	2	2	2	2	2
Protected Phases	2	2	2	2	2	2	2	2	2	2	2
Permitted Phases	2	2	2	2	2	2	2	2	2	2	2
Detector Phase	2	2	2	2	2	2	2	2	2	2	2

Lanes, Volumes, Timings
SRF & Associates
Alternative 4
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
3: Maple Road & Maplemere Road

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	9.0	9.0	9.0	9.0	9.0	27.0	27.0	27.0	27.0	27.0
Total Split (s)	47.0	47.0	0.0	47.0	47.0	0.0	28.0	28.0	0.0	28.0	28.0
Total Split (%)	62.7%	62.7%	0.0%	62.7%	62.7%	0.0%	37.3%	37.3%	0.0%	37.3%	37.3%
Maximum Green (s)	42.0	42.0	42.0	42.0	42.0	42.0	23.0	23.0	23.0	23.0	23.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Lead-Lag											
Lead-Lag Optimize?											
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	None	None	None	None	None
Recall Mode	Min	Min	Min	Min	Min	Min	None	None	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	15.0	15.0	15.0	15.0	15.0
Flash Dont Walk (s)	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Pedestrian Calls (#/hr)							0	0	0	0	0
Act Effct Green (s)	33.6	33.6	33.6	33.6	33.6	33.6	9.7	9.7	9.7	9.7	10.3
Actuated g/C Ratio	0.68	0.68	0.68	0.68	0.68	0.68	0.20	0.20	0.20	0.21	0.21
v/c Ratio	0.17	0.57	0.12	0.54	0.12	0.54	0.21	0.21	0.21	0.21	0.21
Control Delay	7.8	7.6	7.2	7.3	7.2	7.3	15.9	15.9	22.2	22.2	22.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.8	7.6	7.2	7.3	7.2	7.3	15.9	15.9	22.2	22.2	22.2
LOS	A	A	A	A	A	A	B	B	B	C	C
Approach Delay	7.6	7.6	7.3	7.3	7.3	7.3	15.9	15.9	22.2	22.2	22.2
Approach LOS	A	A	A	A	A	A	B	B	B	C	C
Intersection Summary	Other										
Area Type:	Other										
Cycle Length:	75										
Actuated Cycle Length:	49.6										
Natural Cycle:	60										
Control Type:	Actuated-Uncoordinated										
Maximum v/c Ratio:	0.57										
Intersection Signal Delay:	8.3										
Intersection Capacity Utilization:	51.5%										
Analysis Period (min):	15										



Spills and Phases: 3: Maple Road & Maplemere Road
Alternative 4
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
4/24/2014
4: Maple Road & Donna Lea Blvd

	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔↔	↔↔	↔↔	↔↔	↔↔
Volume (vph)	1308	29	23	1132	12	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	50	0	0	0	0
Storage Lanes	0	1	0	1	0	0
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Flt Protected	0.997		0.950		0.914	
Flt Permitted	3529	0	1770	3539	1672	0
Satd. Flow (perm)	3529	0	1770	3539	1672	0
Link Speed (mph)	45		45		30	
Link Distance (ft)	1106		1000		355	
Travel Time (s)	16.8		15.2		8.1	
Peak Hour Factor	0.73	0.73	0.77	0.77	0.82	0.82
Adj. Flow (vph)	1792	40	30	1470	15	26
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1832	0	30	1470	41	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12		12		12	
Link Offset(ft)	0		0		0	
Crosswalk Width(ft)	16		16		16	
Two way Left Turn Lane	Yes		Yes			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15	15	15	15	9
Sign Control	Free	Free	Free	Free	Stop	Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	47.1%					
Analysis Period (min)	15					
ICU Level of Service:	A					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
4/24/2014
4: Maple Road & Donna Lea Blvd

	EBT	EBR	WBL	WBT	NBL	NBR
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔↔	↔↔	↔↔	↔↔	↔↔
Volume (veh/h)	1308	29	23	1132	12	21
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%		0%		0%	
Peak Hour Factor	0.73	0.73	0.77	0.77	0.82	0.82
Hourly flow rate (vph)	1792	40	30	1470	15	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLT		TWLT		2	
Median storage (veh)	2		2		2	
Upstream signal (ft)	1106					
pX, platoon unblocked		0.76		0.76	0.76	0.76
vC, conflicting volume		1832		2606		916
vC1, stage 1 conf vol				1812		
vC2, stage 2 conf vol				795		
vCu, unblocked vol		1460		2481		253
IC, single (s)		4.1		6.8		6.9
IC, 2 stage (s)				5.8		
IF (s)		2.2		3.5		3.3
p0 queue free %		91		89		95
cM capacity (veh/h)		348		128		567
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	1195	637	30	735	735	40
Volume Left	0	0	30	0	0	15
Volume Right	0	40	0	0	0	26
cSH	1700	1700	348	1700	1700	252
Volume to Capacity	0.70	0.37	0.09	0.43	0.43	0.16
Queue Length 95th (ft)	0	0	7	0	0	14
Control Delay (s)	0.0	0.0	16.3	0.0	0.0	22.0
Lane LOS			C			C
Approach Delay (s)	0.0		0.3			22.0
Approach LOS			C			C
Intersection Summary						
Average Delay	0.4					
Intersection Capacity Utilization	47.1%					
ICU Level of Service	A					
Analysis Period (min)	15					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
5: Maple Road & Audubon Golf Club

4/24/2014



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	0	1520	14	8	1024	2	10	0	0	6	0
Ideal Flow (vpph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	50	0	0	0	0	0	0	0	0
Storage Lanes	1	0	1	0	0	0	0	0	0	0	0
Taper Length (ft)	25	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Flt Protected		0.950			0.970			0.970			
Satd. Flow (prot)	1863	3536	0	1770	3539	0	0	1713	0	0	1863
Flt Permitted		0.950			0.970			0.970			
Satd. Flow (perm)	1863	3536	0	1770	3539	0	0	1713	0	0	1863
Link Speed (mph)	45	45	45	45	45	45	45	45	45	45	45
Link Distance (ft)	446	446	446	446	446	446	446	446	446	446	446
Travel Time (s)	6.8	6.8	8.4	8.4	10.7	10.7	10.7	10.7	10.7	10.7	11.1
Adj. Flow (vph)	0	1652	15	9	1101	2	16	0	10	0	0
Shared Lane Traffic (%)		0.92	0.92	0.93	0.93	0.93	0.61	0.61	0.61	0.92	0.92
Lane Group Flow (vph)	0	1667	0	9	1103	0	0	26	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Right
Median Width (ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset (ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width (ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	15	15	15	15	15	15	15	15	15	15
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free

Intersection Summary	EB1	EB2	EB3	WB1	WB2	WB3	NB1	SB1
Volume Total	0	1101	566	9	734	369	26	0
Volume Left	0	0	0	9	0	0	16	0
Volume Right	0	0	15	0	0	2	10	0
cSH	1700	1700	1700	382	1700	1700	131	1700
Volume to Capacity	0.00	0.65	0.33	0.02	0.43	0.22	0.20	0.00
Queue Length 95th (ft)	0	0	0	2	0	0	18	0
Control Delay (s)	0.0	0.0	0.0	14.7	0.0	0.0	39.3	0.0
Lane LOS	E	E	E	B	E	E	A	A
Approach Delay (s)	0.0	0.1	0.1	39.3	0.0	0.0	0.0	0.0
Approach LOS	E	E	E	E	E	E	A	A

Intersection Summary	EB1	EB2	EB3	WB1	WB2	WB3	NB1	SB1
Average Delay	0.4							
Intersection Capacity Utilization	52.5%							
ICU Level of Service	A							
Analysis Period (min)	15							

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 52.5%
ICU Level of Service: A
Analysis Period (min) 15

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
5: Maple Road & Audubon Golf Club

4/24/2014



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (veh/h)	0	1520	14	8	1024	2	10	0	6	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.93	0.93	0.93	0.61	0.61	0.61	0.92	0.92
Hourly flow rate (vph)	0	1652	15	9	1101	2	16	0	10	0	0
Pedestrians											
Lane Width (ft)											
Walking Speed (ft/s)											
Percent Blockage											
Right turn flare (veh)											
Median type											
Median storage (veh)											
Upstream signal (ft)											
pX, platoon unblocked											
vC, conflicting volume	1103		1667				2228	2780	834	1955	2787
vC1, stage 1 conf vol							1660	1660	1119	1119	1119
vC2, stage 2 conf vol							588	1120	836	1667	1667
vCu, unblocked vol	1103		1667				2228	2780	834	1955	2787
IC, single (s)	4.1		4.1				7.5	6.5	6.9	7.5	6.5
IC, 2 stage (s)							6.5	5.5	5.5	6.5	5.5
IF (s)	2.2		2.2				3.5	4.0	3.3	3.5	4.0
p0 queue free %	100		98				83	100	97	100	100
cM capacity (veh/h)	629		382				97	129	312	174	123
478											

Direction, Lane #	EB1	EB2	EB3	WB1	WB2	WB3	NB1	SB1
Volume Total	0	1101	566	9	734	369	26	0
Volume Left	0	0	0	9	0	0	16	0
Volume Right	0	0	15	0	0	2	10	0
cSH	1700	1700	1700	382	1700	1700	131	1700
Volume to Capacity	0.00	0.65	0.33	0.02	0.43	0.22	0.20	0.00
Queue Length 95th (ft)	0	0	0	2	0	0	18	0
Control Delay (s)	0.0	0.0	0.0	14.7	0.0	0.0	39.3	0.0
Lane LOS	E	E	E	B	E	E	A	A
Approach Delay (s)	0.0	0.1	0.1	39.3	0.0	0.0	0.0	0.0
Approach LOS	E	E	E	E	E	E	A	A

Intersection Summary	EB1	EB2	EB3	WB1	WB2	WB3	NB1	SB1
Average Delay	0.4							
Intersection Capacity Utilization	52.5%							
ICU Level of Service	A							
Analysis Period (min)	15							

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 52.5%
ICU Level of Service: A
Analysis Period (min) 15

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
6: Maple Road & North Forest Road

4/24/2014

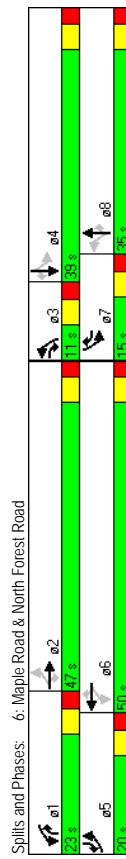
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	238	1155	143	238	766	96	92	370	213	169	388
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	415	220	315	220	315	220	250	250	250	250	250
Storage Lanes	1	1	1	1	1	1	1	1	1	1	1
Taper Length (ft)	90	115	60	25	95	25	95	25	90	90	25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.950		0.950		0.850		0.850		0.850		0.850
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1863	1583	1770	1863
Flt Permitted	0.206		0.092		0.161		0.161		0.146		0.146
Satd. Flow (perm)	384	3539	1583	1770	3539	1583	300	1863	1583	272	1863
Right Turn on Red	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes
Satd. Flow (RTOR)	122		122				19				69
Link Speed (mph)	45		45		45		35				35
Link Distance (ft)	1705		820		529		608				608
Travel Time (s)	25.8		12.4		10.3		11.8				11.8
Peak Hour Factor	0.92	0.92	0.92	0.90	0.90	0.90	0.96	0.96	0.96	0.87	0.87
Adj. Flow (vph)	259	1255	155	264	851	107	96	385	222	194	446
Shared Lane Traffic (%)											
Lane Group Flow (vph)	259	1255	155	264	851	107	96	385	222	194	446
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Right	Left	Left	Right	Left	Right
Median Width (ft)	12		12		12		12		12		12
Link Offset (ft)	16		16		16		16		16		16
Two way Left Turn Lane	Yes		Yes		Yes		Yes		Yes		Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	2	1	2	1	2	1	1	2
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru
Leading Detector (ft)	20	100	20	100	20	100	20	100	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size (ft)	20	6	20	20	6	20	20	6	20	20	6
Detector 1 Type	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position (ft)	94		94		94		94		94		94
Detector 2 Size (ft)	6		6		6		6		6		6
Detector 2 Type	Ch+Ex		Ch+Ex		Ch+Ex		Ch+Ex		Ch+Ex		Ch+Ex
Detector 2 Channel											
Detector 2 Extend (s)	0.0		0.0		0.0		0.0		0.0		0.0
Turn Type	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt
Protected Phases	5	2	3	1	6	7	3	8	1	7	4
Permitted Phases	2	2	2	6	6	6	8	8	4	4	4
Detector Phase	5	2	3	1	6	7	3	8	1	7	4

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
6: Maple Road & North Forest Road

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	1.0	4.0	1.0	1.0	4.0	1.0	1.0	4.0	1.0	1.0	4.0
Minimum Split (s)	7.0	35.0	7.0	7.0	35.0	7.0	7.0	35.0	7.0	7.0	35.0
Total Split (s)	20.0	47.0	11.0	23.0	50.0	15.0	11.0	35.0	23.0	15.0	39.0
Total Split (%)	16.7%	39.2%	9.2%	19.2%	41.7%	12.5%	9.2%	29.2%	19.2%	12.5%	32.5%
Maximum Green (s)	14.0	41.0	5.0	17.0	44.0	9.0	5.0	29.0	17.0	9.0	33.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Walk Time (s)	7.0		7.0		7.0		7.0		7.0		7.0
Flash Dont Walk (s)	22.0		22.0		22.0		22.0		22.0		22.0
Pedestrian Calls (#/hr)	0		0		0		0		0		0
Act Effct Green (s)	54.3	41.1	52.1	59.5	43.7	58.7	31.9	26.9	48.7	39.9	30.9
Actuated g/C Ratio	0.46	0.35	0.45	0.51	0.37	0.50	0.27	0.23	0.42	0.34	0.26
v/c Ratio	0.77	1.01	0.20	0.87	0.64	0.13	0.66	0.90	0.33	0.93	0.21
Control Delay	34.0	66.1	6.5	57.5	33.3	16.9	51.1	68.7	22.3	77.5	65.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.0	66.1	6.5	57.5	33.3	16.9	51.1	68.7	22.3	77.5	65.2
LOS	C	E	A	E	C	B	D	D	E	C	E
Approach Delay	55.5		37.1		51.6		51.6		58.2		58.2
Approach LOS	E		D		D		D		E		E
Intersection Summary	Other										
Area Type	Other										
Cycle Length	120										
Actuated Cycle Length	116.8										
Natural Cycle	105										
Control Type	Actuated-Uncoordinated										
Maximum v/c Ratio	1.01										
Intersection Signal Delay	50.3										
Intersection Capacity Utilization	93.9%										
Analysis Period (min)	15										



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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
7: Sheridan Drive & Mill Street

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	22	1496	29	121	1368	53	146	53	148	34	68
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vpph)	100	0	150	0	40	0	40	0	75	0	0
Storage Length (ft)	1	0	1	0	1	0	1	0	1	0	0
Storage Lanes	65	25	60	25	25	25	25	25	25	25	25
Taper Length (ft)	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.997	0.994					0.890				0.975
Flt Protected	0.950		0.950		0.950		0.950		0.950		0.950
Satd. Flow (prot)	1770	3529	0	1770	3518	0	1770	1658	0	1770	1816
Flt Permitted	0.089		0.081		0.597		0.608		0.608		0.608
Satd. Flow (perm)	166	3529	0	151	3518	0	1112	1658	0	1133	1816
Right Turn on Red		No		Yes			No		No		Yes
Satd. Flow (RTOR)		4		4							8
Link Speed (mph)	45		45		45		30		30		30
Link Distance (ft)	2782		977		838		362		838		362
Travel Time (s)	42.2		14.8		19.0		8.2		19.0		8.2
Peak Hour Factor	0.84	0.84	0.84	0.92	0.92	0.83	0.83	0.83	0.83	0.77	0.77
Adj. Flow (vph)	26	1781	35	132	1487	58	176	64	178	44	88
Shared Lane Traffic (%)											
Lane Group Flow (vph)	26	1816	0	132	1545	0	176	242	0	44	106
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Median Width (ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset (ft)	0		0		0		0		0		0
Crosswalk Width (ft)	16		16		16		16		16		16
Two way Left Turn Lane	Yes		Yes		Yes		Yes		Yes		Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9	15	9	15	9	15
Number of Detectors	1	2	1	2	1	2	1	2	1	2	1
Detector Template	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left
Leading Detector (ft)	20	100	20	100	20	100	20	100	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size (ft)	20	6	20	6	20	6	20	6	20	6	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position (ft)	94	94	94	94	94	94	94	94	94	94	94
Detector 2 Size (ft)	6	6	6	6	6	6	6	6	6	6	6
Detector 2 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 2 Channel											
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	pm+pt	pm+pt	pm+pt	pm+pt	pm+pt	pm+pt	pm+pt	Perm	Perm	Perm
Protected Phases	2	1	6	6	8	8	4	4	4	4	4
Permitted Phases	2	2	1	6	3	8	4	4	4	4	4
Detector Phase	2	2	1	6	3	8	4	4	4	4	4

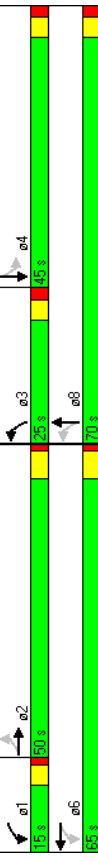
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
7: Sheridan Drive & Mill Street

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase	4.0	4.0	1.0	4.0	4.0	1.0	4.0	4.0	4.0	4.0	4.0
Minimum Initial (s)	28.3	28.3	6.2	28.3	6.2	28.3	6.2	34.2	34.2	34.2	34.2
Minimum Split (s)	50.0	50.0	0.0	15.0	65.0	0.0	25.0	70.0	0.0	45.0	45.0
Total Split (s)	37.0%	37.0%	0.0%	11.1%	48.1%	0.0%	18.5%	51.9%	0.0%	33.3%	33.3%
Total Split (%)	44.5	44.5	10.7	59.5	19.8	64.8	39.8	39.8	39.8	39.8	39.8
Maximum Green (s)	4.3	4.3	3.2	4.3	3.2	4.3	3.2	3.2	3.2	3.2	3.2
Yellow Time (s)	1.2	1.2	1.1	1.2	1.1	1.2	2.0	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	5.5	5.5	4.0	4.3	5.5	4.0	5.2	5.2	4.0	5.2	5.2
Total Lost Time (s)	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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
Recall Mode	None	None	None	None	None	None	Max	Max	Max	Max	Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0	15.0	15.0	15.0	15.0	22.0	22.0	22.0	22.0	22.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0	0	0	0
Act Effct Green (s)	45.1	45.1	60.7	59.5	64.8	64.8	64.8	64.8	64.8	39.8	39.8
Actuated g/C Ratio	0.33	0.33	0.45	0.44	0.48	0.48	0.48	0.48	0.48	0.29	0.29
v/c Ratio	0.46	1.54	0.70	0.99	0.28	0.30	0.13	0.20	0.13	0.20	0.20
Control Delay	67.1	279.9	45.9	59.1	21.7	22.7	36.4	34.1	36.4	34.1	34.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.1	279.9	45.9	59.1	21.7	22.7	36.4	34.1	36.4	34.1	34.1
LOS	E	F	D	E	C	C	D	C	D	C	C
Approach Delay	276.9	F	58.1	E	22.3	C	34.8	C	34.8	C	C
Approach LOS	F	E	E	E	E	E	C	C	C	C	C

Intersection Summary
Area Type: Other
Cycle Length: 135
Actuated Cycle Length: 135
Natural Cycle: 120
Control Type: Semi Act-Uncoordinated
Maximum v/c Ratio: 1.54
Intersection Signal Delay: 152.2
Intersection Capacity Utilization 81.0%
Analysis Period (min) 15



Spills and Phases: 7: Sheridan Drive & Mill Street

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
8: Sheridan Drive & North Forest Road

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	138	1349	294	305	1162	43	283	466	82	161	540
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	405	170	260	0	180	0	265	180	200	200	200
Storage Lanes	1	1	1	0	1	0	1	1	1	1	1
Taper Length (ft)	200	25	200	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95
Flt Protected	0.950		0.950		0.950		0.950		0.850		0.850
Satd. Flow (prot)	1770	3539	1583	1770	3522	0	1770	1863	1583	1770	3539
Flt Permitted	0.073		0.069		0.150		0.144		0.144		0.144
Satd. Flow (perm)	136	3539	1583	129	3522	0	279	1863	1583	268	3539
Right Turn on Red	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Satd. Flow (RTOR)	137		137		3		70		70		210
Link Speed (mph)	45		45		45		40		40		35
Link Distance (ft)	971		2219		547		547		354		354
Travel Time (s)	14.7		33.6		9.3		9.3		6.9		6.9
Peak Hour Factor	0.94	0.94	0.94	0.93	0.93	0.93	0.89	0.89	0.89	0.95	0.95
Adj. Flow (vph)	147	1435	313	328	1249	46	318	524	92	169	568
Shared Lane Traffic (%)											
Lane Group Flow (vph)	147	1435	313	328	1295	0	318	524	92	169	568
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Median Width (ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset (ft)	0		0		0		0		0		0
Crosswalk Width (ft)	16		16		16		16		16		16
Two way Left Turn Lane	Yes		Yes		Yes		Yes		Yes		Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	2	9	15	15	9	15	15	9
Number of Detectors	1	2	1	2	1	2	1	2	1	1	2
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru
Leading Detector (ft)	20	100	20	100	20	100	20	100	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size (ft)	20	6	20	20	6	20	6	20	20	6	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position (ft)	94		94		94		94		94		94
Detector 2 Size (ft)	6		6		6		6		6		6
Detector 2 Type	CI+EX		CI+EX		CI+EX		CI+EX		CI+EX		CI+EX
Detector 2 Channel											
Detector 2 Extend (s)	0.0		0.0		0.0		0.0		0.0		0.0
Turn Type	pm+pt	Perm	pm+pt	pm+pt	Perm	pm+pt	Perm	pm+pt	Perm	pm+pt	Perm
Protected Phases	1	6	5	2	7	4	7	4	3	8	8
Permitted Phases	6	6	6	2	4	4	4	4	8	8	8
Detector Phase	1	6	6	5	2	7	4	4	3	8	8

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
8: Sheridan Drive & North Forest Road

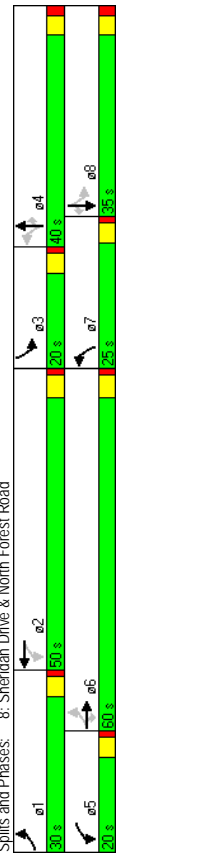
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.3	27.9	27.9	8.3	27.9	27.9	21.0	27.2	27.2	8.3	27.2
Total Split (s)	30.0	60.0	60.0	20.0	50.0	0.0	25.0	40.0	40.0	20.0	35.0
Total Split (%)	21.4%	42.9%	42.9%	14.3%	35.7%	0.0%	17.9%	28.6%	28.6%	14.3%	25.0%
Maximum Green (s)	25.7	54.9	54.9	15.7	44.9	20.7	34.9	34.9	34.9	15.7	29.9
Yellow Time (s)	3.2	3.9	3.9	3.2	3.9	3.2	3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.1	1.2	1.1	1.2	1.1	1.2	1.1	1.1	1.1	1.1	1.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.3	5.1	5.1	4.3	5.1	4.0	4.3	5.1	5.1	4.3	5.1
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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
Recall Mode	None	Max	None	Max	None	Max	None	None	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0	0	0	0
Act Effct Green (s)	68.2	54.9	54.9	73.6	58.2	53.7	35.0	35.0	35.0	42.2	27.9
Actuated g/C Ratio	0.49	0.40	0.40	0.53	0.42	0.39	0.25	0.25	0.25	0.31	0.20
v/c Ratio	0.68	1.02	0.44	1.28	0.87	0.96	1.11	1.11	1.11	0.74	0.44
Control Delay	43.8	69.8	18.7	188.4	44.7	75.9	121.7	14.8	50.7	61.4	9.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.8	69.8	18.7	188.4	44.7	75.9	121.7	14.8	50.7	61.4	9.0
LOS	D	E	B	F	D	E	F	B	D	D	E
Approach Delay	59.3		73.8		95.6		47.8		47.8		D
Approach LOS	E		E		F		D		D		D

Intersection Summary

Area Type:	Other
Cycle Length:	140
Actuated Cycle Length:	138
Natural Cycle:	115
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	1.28
Intersection Signal Delay:	67.9
Intersection Capacity Utilization:	103.3%
Analysis Period (min):	15

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
9: Proposed Access Driveway & North Forest Road

4/24/2014



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			4		
Volume (vph)	41	192	30	623	714	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fit	0.889			0.996		
Fit Protected	0.991			0.998		
Satd. Flow (prot)	1641	0	0	1859	1855	0
Fit Permitted	0.991			0.998		
Satd. Flow (perm)	1641	0	0	1859	1855	0
Link Speed (mph)	30			35	35	
Link Distance (ft)	245			310	198	
Travel Time (s)	5.6			6.0	3.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	45	209	33	677	776	21
Shared Lane Traffic (%)						
Lane Group Flow (vph)	254	0	0	710	797	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	78.0%					
Analysis Period (min)	15					
ICU Level of Service	D					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
9: Proposed Access Driveway & North Forest Road

4/24/2014



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			4		
Volume (veh/h)	41	192	30	623	714	19
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	45	209	33	677	776	21
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)				None	None	
Median type				None	None	
Median storage (veh)				664		
Upstream signal (ft)						
pX, platoon unblocked	0.72					
vC, conflicting volume	1529	786	797			
vC1, stage 1 cont vol						
vC2, stage 2 cont vol						
vCu, unblocked vol	1540	786	797			
IC, single (s)	6.4	6.2	4.1			
IC, 2 stage (s)						
IF (s)	3.5	3.3	2.2			
p0 queue free %	49	47	96			
cM capacity (veh/h)	87	392	825			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	253	710	797			
Volume Left	45	33	0			
Volume Right	209	0	21			
cSH	243	825	1700			
Volume to Capacity	1.04	0.04	0.47			
Queue Length 95th (ft)	261	3	0			
Control Delay (s)	113.5	1.0	0.0			
Lane LOS	F	A				
Approach Delay (s)	113.5	1.0	0.0			
Approach LOS	F					
Intersection Summary						
Average Delay	16.8					
Intersection Capacity Utilization	78.0%					
ICU Level of Service	D					
Analysis Period (min)	15					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
 10: Sheridan Drive & Proposed Access Driveway

4/24/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	40	1706	13	5	1648	20	13	0	17	34	0
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vpph)	350	0	75	0	0	0	0	0	0	0	0
Storage Length (ft)	1	0	1	0	0	0	0	0	0	0	1
Storage Lanes	25	25	25	25	25	25	25	25	25	25	25
Taper Length (ft)	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.999	0.999	0.998	0.998	0.998	0.998	0.922	0.922	0.950	0.950	0.850
Flt Protected	0.950	0.950	0.950	0.950	0.950	0.950	0.979	0.979	0.950	0.950	0.950
Satd. Flow (prot)	1770	3536	0	1770	3532	0	1681	0	1681	0	1770
Flt Permitted	0.950	0.950	0.950	0.950	0.950	0.950	0.979	0.979	0.950	0.950	0.950
Satd. Flow (perm)	1770	3536	0	1770	3532	0	1681	0	1681	0	1770
Link Speed (mph)	45	45	45	45	45	45	30	30	30	30	30
Link Distance (ft)	635	635	697	697	697	697	278	278	204	204	204
Travel Time (s)	9.6	9.6	10.6	10.6	10.6	10.6	6.3	6.3	4.6	4.6	4.6
Peak Hour Factor	0.87	0.87	0.87	0.94	0.94	0.94	0.75	0.75	0.75	0.75	0.92
Adj. Flow (vph)	46	1961	15	5	1753	21	17	0	23	37	0
Shared Lane Traffic (%)	46	1976	0	5	1774	0	0	40	0	0	37
Lane Group Flow (vph)	No	No	No	No	No	No	No	No	No	No	No
Enter Blocked Intersection	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left
Lane Alignment	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left
Median Width (ft)	12	12	12	12	12	12	0	0	0	0	0
Link Offset (ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width (ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9	15	9	15	9	15
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop
Intersection Summary											
Area Type:	Other										
Control Type:	Unsignalized										
Intersection Capacity Utilization	73.6%										
Analysis Period (min)	15										

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
 10: Sheridan Drive & Proposed Access Driveway

4/24/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	40	1706	13	5	1648	20	13	0	17	34	0
Volume (veh/h)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop
Grade	0.87	0.87	0.87	0.94	0.94	0.94	0.75	0.75	0.75	0.92	0.92
Peak Hour Factor	46	1961	15	5	1753	21	17	0	23	37	0
Hourly flow rate (vph)	46	1961	15	5	1753	21	17	0	23	37	0
Pedestrians	46	1961	15	5	1753	21	17	0	23	37	0
Lane Width (ft)	46	1961	15	5	1753	21	17	0	23	37	0
Walking Speed (ft/s)	46	1961	15	5	1753	21	17	0	23	37	0
Percent Blockage	46	1961	15	5	1753	21	17	0	23	37	0
Right turn flare (veh)	46	1961	15	5	1753	21	17	0	23	37	0
Median type	46	1961	15	5	1753	21	17	0	23	37	0
Median storage (veh)	46	1961	15	5	1753	21	17	0	23	37	0
Upstream signal (ft)	46	1961	15	5	1753	21	17	0	23	37	0
pX, platoon unblocked	46	1961	15	5	1753	21	17	0	23	37	0
vC, conflicting volume	1774	1976	1976	1976	1976	1976	3195	3845	988	2870	3842
vC1, stage 1 cont vol	2060	2060	2060	2060	2060	2060	2060	2060	2060	1774	1774
vC2, stage 2 cont vol	1135	1785	1785	1135	1785	1785	1135	1785	1785	1095	2068
vCu, unblocked vol	1774	1353	1353	3314	4359	0	2790	4354	887	887	887
IC, single (s)	4.1	4.1	4.1	7.5	6.5	6.9	7.5	6.5	6.5	6.5	6.9
IC, 2 stage (s)	6.5	5.5	5.5	6.5	5.5	5.5	6.5	5.5	6.5	5.5	5.5
IF (s)	2.2	2.2	2.2	2.2	2.2	2.2	3.5	4.0	3.3	3.5	4.0
p0 queue free %	87	98	98	98	98	98	100	97	54	100	14
cM capacity (veh/h)	347	314	314	314	314	314	0	60	674	81	287
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1	SB 2	SB 2	SB 2
Volume Total	46	1307	669	5	1169	606	40	37	248	248	248
Volume Left	46	0	0	5	0	0	17	37	0	0	0
cSH	347	1700	1700	314	1700	1700	1	81	287	287	287
Volume to Capacity	0.13	0.77	0.39	0.02	0.69	0.36	68.95	0.46	0.86	0.86	0.86
Queue Length 95th (ft)	11	0	0	1	0	0	Err	47	187	187	187
Control Delay (s)	17.0	0.0	0.0	16.7	0.0	0.0	Err	82.7	63.1	63.1	63.1
Lane LOS	C	F	C	C	F	F	F	F	F	F	F
Approach Delay (s)	0.4	0.0	0.0	0.0	0.0	0.0	Err	65.6	65.6	65.6	65.6
Approach LOS	F	F	F	F	F	F	F	F	F	F	F
Intersection Summary											
Average Delay	101.7										
Intersection Capacity Utilization	73.6%										
Analysis Period (min)	15										
ICU Level of Service	D										

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
11: Sheridan Drive & Frankhauser Road

4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (vph)	54	1650	1849	41	109	154
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105	0	0	0	0	50
Storage Lanes	1	0	0	0	1	1
Taper Length (ft)	65	25	25	25	25	25
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Flt Permitted	0.950	0.997			0.950	0.850
Satd. Flow (prot)	1770	3539	3529	0	1770	1583
Flt Permitted	0.072				0.950	
Satd. Flow (perm)	134	3539	3529	0	1770	1583
Right Turn on Red		Yes			Yes	Yes
Satd. Flow (RTOR)		3			3	2
Link Speed (mph)	45	45			30	
Link Distance (ft)	101.4	635			828	
Travel Time (s)	15.4	9.6			18.8	
Peak Hour Factor	0.90	0.90	0.91	0.91	0.82	0.82
Adj. Flow (vph)	60	1833	2032	45	133	188
Shared Lane Traffic (%)						
Lane Group Flow (vph)	60	1833	2077	0	133	188
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Right
Median Width(ft)	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0
Crosswalk Width(ft)	16	16			16	
Two way Left Turn Lane	Yes	Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	2	2	9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Left	Right	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94	94				
Detector 2 Size(ft)	6	6			6	6
Detector 2 Type	CI+EX	CI+EX			CI+EX	CI+EX
Detector 2 Channel						
Detector 2 Extend (s)	0.0	0.0			0.0	0.0
Turn Type	Perm				Perm	Perm
Protected Phases	2	2	6	4	4	4
Permitted Phases	2	2	6	4	4	4
Detector Phase	2	2	6	4	4	4

Lanes, Volumes, Timings
SRF & Associates
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
11: Sheridan Drive & Frankhauser Road

4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	1.0	1.0
Minimum Split (s)	40.0	40.0	40.0	40.0	31.1	31.1
Total Split (s)	40.0	40.0	40.0	40.0	40.0	40.0
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Maximum Green (s)	35.2	35.2	35.2	35.2	34.9	34.9
Yellow Time (s)	3.9	3.9	3.9	3.9	3.2	3.2
All-Red Time (s)	0.9	0.9	0.9	0.9	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.8	4.8	4.8	4.8	5.1	5.1
LeadLag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0	15.0	15.0	19.0	19.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effct Green (s)	55.2	55.2	55.2	55.2	14.9	14.9
Actuated g/C Ratio	0.69	0.69	0.69	0.69	0.19	0.19
v/c Ratio	0.65	0.75	0.85	0.40	0.63	0.63
Control Delay	48.8	11.6	15.6	31.0	38.6	38.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.8	11.6	15.6	31.0	38.6	38.6
LOS	D	B	B	C	C	D
Approach Delay		12.8	15.6		35.5	
Approach LOS		B	B		D	
Intersection Summary						
Area Type:	Other					
Cycle Length:	80					
Actuated Cycle Length:	80					
Offset:	55 (69%), Referenced to phase 2:EBTL and 6:WBT, Start of Green					
Natural Cycle:	90					
Control Type:	Actuated-Coordinated					
Maximum v/c Ratio:	0.85					
Intersection Signal Delay:	15.8					
Intersection Capacity Utilization:	70.2%					
Analysis Period (min):	15					
Spills and Phases:	11: Sheridan Drive & Frankhauser Road					
	↔	↔	↔	↔	↔	↔
	40 s	40 s	40 s	40 s	40 s	40 s

Lanes, Volumes, Timings
SRF & Associates
Alternative 4
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
12: Sheridan Drive & I-290 NB

4/24/2014

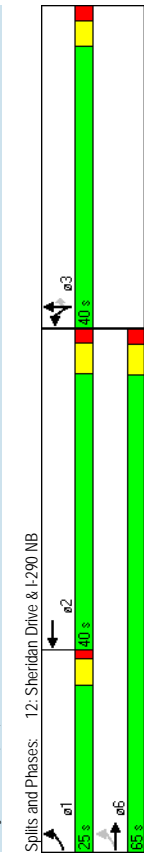
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	355	1320	0	1338	715	317	0	406	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	0	0	230	0	0	120	0	0	0
Storage Lanes	1	0	0	0	1	0	0	1	0	0	0
Taper Length (ft)	105	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.95	0.91	0.95	1.00	1.00	1.00
Flt Protected	0.950			0.948			0.950	0.987			
Satd. Flow (prot)	1770	5085	0	4821	0	1681	1489	1504	0	0	0
Flt Permitted	0.082						0.950	0.987			
Satd. Flow (perm)	153	5085	0	4821	0	1681	1489	1504	0	0	0
Right Turn on Red		Yes		Yes			Yes	Yes			Yes
Satd. Flow (RTOR)		136		45			45	45			30
Link Speed (mph)	45			45			30	30			30
Link Distance (ft)	610			193			830	423			423
Travel Time (s)	9.2			2.9			18.9	9.6			9.6
Peak Hour Factor	0.99	0.99	0.99	0.92	0.92	0.80	0.80	0.80	0.80	0.92	0.92
Adj. Flow (vph)	359	1333	0	1454	777	396	0	508	0	0	0
Shared Lane Traffic (%)				20%			43%				
Lane Group Flow (vph)	359	1333	0	2231	0	317	297	290	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left	Left	Right	Left	Left	Right
Median Width(ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane											
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	15	1	2	1	15	9
Number of Detectors	1	2	2	2	2	2	1	2	1	2	1
Detector Template	Left	Thru	Thru	Left	Thru	Right	Left	Thru	Right	Left	Right
Leading Detector (ft)	20	100	100	100	20	100	20	100	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	6	20	6	20	6	20	6	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94			94				
Detector 2 Size(ft)	6			6			6				
Detector 2 Type	CI+EX			CI+EX			CI+EX				
Detector 2 Channel											
Detector 2 Extend (s)	0.0			0.0			0.0				
Turn Type	pm+pt			custom			Perm				
Protected Phases	1	6	2	3	3	3	3	3	3	3	3
Permitted Phases	6	6	2	3	3	3	3	3	3	3	3
Detector Phase	1	6	2	3	3	3	3	3	3	3	3

Lanes, Volumes, Timings
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
12: Sheridan Drive & I-290 NB

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	1.0	4.0		4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	6.2	33.9		27.8		29.0	29.0	29.0	29.0	29.0	29.0
Total Split (s)	25.0	65.0	0.0	0.0	40.0	0.0	40.0	40.0	40.0	40.0	40.0
Total Split (%)	23.8%	61.9%	0.0%	0.0%	38.1%	0.0%	38.1%	38.1%	38.1%	38.1%	38.1%
Maximum Green (s)	20.7	59.1		34.2		34.8	34.8	34.8	34.8	34.8	34.8
Yellow Time (s)	3.2	3.9		3.9		3.2	3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.1	2.0		1.9		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.3	5.9	4.0	5.8	4.0	5.2	5.2	5.2	5.2	4.0	4.0
Lead/Lag	Lead	Lag		Lag							
Vehicle Extension (s)	2.0	3.0		3.0		2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	C-Max		C-Max		None	None	None	None	None	None
Walk Time (s)	7.0			7.0							
Flash Dont Walk (s)	21.0			15.0							
Pedestrian Calls (#/hr)	0			0							
Act Effct Green (s)	69.8	68.2		44.8		25.7	25.7	25.7	25.7	25.7	25.7
Actuated g/C Ratio	0.66	0.65		0.43		0.24	0.24	0.24	0.24	0.24	0.24
v/c Ratio	0.90	0.40		1.04		0.77	0.74	0.74	0.74	0.72	0.72
Control Delay	54.5	10.1		62.3		48.9	41.7	41.7	41.7	41.7	41.7
Queue Delay	0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.5	10.1		62.3		48.9	41.7	41.7	41.7	41.7	41.7
LOS	D	B		E		D	D	D	D	D	D
Approach Delay	19.5			62.3			43.7				
Approach LOS	B			E			D				



Intersection Summary
Area Type: Other
Cycle Length: 105
Actuated Cycle Length: 105
Offset: 59 (56%), Referenced to phase 2:WBT and 6:EBTL, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.04
Intersection Signal Delay: 43.8
Intersection Capacity Utilization 87.2%
Analysis Period (min) 15
Intersection LOS: D
ICU Level of Service E

Lanes, Volumes, Timings
SRF & Associates
Alternative 4
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
13: Sheridan Drive & Harlem Road

4/24/2014

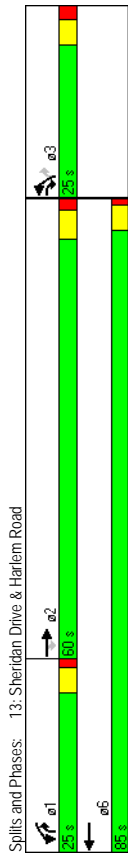
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔	↔↔	↔↔	↔↔	↔↔
Volume (vph)	975	604	502	1152	267	698
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	215	0	140	0	0
Storage Lanes	1	1	1	2	2	2
Taper Length (ft)	230	100	100	100	25	25
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	0.88
Flt Protected	0.850					0.850
Satd. Flow (prot)	3539	1583	3433	3539	3433	2787
Flt Permitted	0.950					0.950
Satd. Flow (perm)	3539	1583	3433	3539	3433	2787
Right Turn on Red	No					Yes
Satd. Flow (RTOR)						132
Link Speed (mph)	45			45	35	
Link Distance (ft)	314			610	338	
Travel Time (s)	4.8			9.2	6.6	
Peak Hour Factor	0.98	0.98	0.95	0.95	0.85	0.85
Adj. Flow (vph)	995	616	528	1213	314	821
Shared Lane Traffic (%)						
Lane Group Flow (vph)	995	616	528	1213	314	821
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			24	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		15	15	9
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (ft)	100	20	20	100	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	6	20	20	6	20	20
Detector 1 Type	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Ch+Ex			Ch+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type		pm+ov	Prot			pm+ov
Protected Phases	2	3	1	6	3	1
Permitted Phases	2	3	1	6	3	1
Detector Phase	2	3	1	6	3	1

Lanes, Volumes, Timings
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Alternative 4
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
13: Sheridan Drive & Harlem Road

4/24/2014

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Switch Phase	↔	↔	↔	↔	↔	↔
Minimum Initial (s)	1.0	1.0	1.0	4.0	1.0	1.0
Minimum Split (s)	30.5	6.2	5.3	32.3	6.2	5.3
Total Split (s)	60.0	25.0	25.0	85.0	25.0	25.0
Total Split (%)	54.5%	22.7%	22.7%	77.3%	22.7%	22.7%
Maximum Green (s)	54.5	19.8	20.7	80.7	19.8	20.7
Yellow Time (s)	3.9	3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.6	2.0	1.1	1.1	2.0	1.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.2	4.3	4.3	5.2	4.3
Lead/Lag	Lag	Lead	Lead	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	C-Max	None	None	None	None	None
Walk Time (s)	7.0			7.0		
Flash Dont Walk (s)	18.0			21.0		
Pedestrian Calls (#/hr)	0			0		
Act Effct Green (s)	59.6	79.8	20.7	85.8	14.7	40.6
Actuated g/C Ratio	0.54	0.73	0.19	0.78	0.13	0.37
v/c Ratio	0.52	0.54	0.82	0.44	0.68	0.74
Control Delay	18.2	9.2	53.9	4.9	53.0	28.8
Queue Delay	0.0	0.0	0.0	0.3	0.0	0.0
Total Delay	18.2	9.2	53.9	5.3	53.0	28.8
LOS	B	A	D	A	D	C
Approach Delay	14.7			20.0	35.5	
Approach LOS	B			C	D	
Intersection Summary						
Area Type:	Other					
Cycle Length:	110					
Actuated Cycle Length:	110					
Offset:	36 (33%), Referenced to phase 2:EBT, Start of Green					
Natural Cycle:	60					
Control Type:	Actuated-Coordinated					
Maximum v/c Ratio:	0.82					
Intersection Signal Delay:	22.0					
Intersection Capacity Utilization:	61.4%					
Analysis Period (min):	15					



Lanes, Volumes, Timings
SRF & Associates
Alternative 4
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
14: 1-290 SB & Harlem Road
4/24/2014

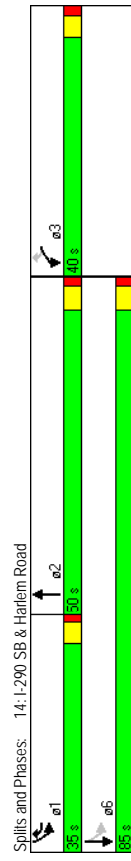
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	234	367	563	11	531	539
Ideal Flow (vppf)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	0	0	330	
Storage Lanes	1	1	0	0	1	
Taper Length (ft)	25	25	25	25	75	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	3529	0	1770	3539
Flt Permitted	0.950				0.156	
Satd. Flow (perm)	1770	1583	3529	0	291	3539
Right Turn on Red	Yes	Yes	Yes	Yes		
Satd. Flow (RTOR)	73	2				
Link Speed (mph)	30	35				35
Link Distance (ft)	333	250				456
Travel Time (s)	7.6	4.9				8.9
Peak Hour Factor	0.69	0.69	0.77	0.77	0.92	0.92
Adj. Flow (vph)	339	532	731	14	577	586
Shared Lane Traffic (%)						
Lane Group Flow (vph)	339	532	745	0	577	586
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width (ft)	12	12				12
Link Offset (ft)	0	0				0
Crosswalk Width (ft)	16	16				16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru	Left	Thru	
Leading Detector (ft)	20	20	100	20	100	
Trailing Detector (ft)	0	0	0	0	0	
Detector 1 Position (ft)	0	0	0	0	0	
Detector 1 Size (ft)	20	20	6	20	6	
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position (ft)			94			94
Detector 2 Size (ft)			6			6
Detector 2 Type			CI+EX			CI+EX
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type		pm+ov			pm+pl	
Protected Phases	3	1	2	1	1	6
Permitted Phases	3	1	2	1	1	6

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
14: 1-290 SB & Harlem Road
4/24/2014

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	9.2	30.6	9.2	21.0	
Total Split (s)	40.0	35.0	50.0	0.0	35.0	85.0
Total Split (%)	32.0%	28.0%	40.0%	0.0%	28.0%	68.0%
Maximum Green (s)	35.2	30.7	45.0		30.7	80.0
Yellow Time (s)	3.2	3.2	3.6		3.2	3.6
All-Red Time (s)	1.6	1.1	1.4		1.1	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.8	4.3	5.0	4.0	4.3	5.0
Lead/Lag		Lead	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Min	None	None	None
Walk Time (s)			10.0			
Flash Dont Walk (s)			15.0			
Pedestrian Calls (#/hr)			0			
Act Effct Green (s)	23.8	59.0	27.3		62.7	62.0
Actuated g/C Ratio	0.25	0.62	0.28		0.65	0.65
v/c Ratio	0.77	0.53	0.74		0.88	0.26
Control Delay	47.0	11.9	36.5		38.4	8.1
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	47.0	11.9	36.5		38.4	8.1
LOS	D	B	D		D	A
Approach Delay	25.6		36.5			23.1
Approach LOS	C		D			C

Intersection Summary

Area Type:	Other
Cycle Length:	125
Actuated Cycle Length:	95.8
Natural Cycle:	80
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.88
Intersection Signal Delay:	27.5
Intersection Capacity Utilization:	70.0%
Analysis Period (min):	15



Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
17: Proposed Access Driveway & Frankhauser Road 4/24/2014

	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Volume (vph)	171	0	75	20	0	92
Ideal Flow (vpph)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fit	0.971					
Fit Protected	0.950					
Satd. Flow (prot)	1770	0	1809	0	0	1863
Fit Permitted	0.950					
Satd. Flow (perm)	1770	0	1809	0	0	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	236		828			109
Travel Time (s)	5.4		18.8			2.5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	186	0	82	22	0	100
Shared Lane Traffic (%)						
Lane Group Flow (vph)	186	0	104	0	0	100
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	9	9	15	15
Sign Control	Stop	Free	Free	Free	Free	Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	21.3%					
Analysis Period (min)	15					
ICU Level of Service	A					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
17: Proposed Access Driveway & Frankhauser Road 4/24/2014

	WBL	WBR	NBT	NBR	SBL	SBT
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Volume (veh/h)	171	0	75	20	0	92
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	186	0	82	22	0	100
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)			828			
pX, platoon unblocked						
vC, conflicting volume	192	92				103
vC1, stage 1 cont vol						
vC2, stage 2 cont vol	192	92				103
vCu, unblocked vol	6.4	6.2				4.1
IC, single (s)						
IC, 2 stage (s)						
IF (s)	3.5	3.3				2.2
p0 queue free %	77	100				100
cM capacity (veh/h)	797	965				1489
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	186	103	100			
Volume Left	186	0	0			
Volume Right	0	22	0			
cSH	797	1700	1489			
Volume to Capacity	0.23	0.06	0.00			
Queue Length 95th (ft)	23	0	0			
Control Delay (s)	10.9	0.0	0.0			
Lane LOS	B					
Approach Delay (s)	10.9	0.0	0.0			
Approach LOS	B					
Intersection Summary						
Average Delay	5.2					
Intersection Capacity Utilization	21.3%					
ICU Level of Service	A					
Analysis Period (min)	15					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
56: Maple Road & Proposed North Driveway 4/24/2014

	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	↔↔	↔	↔↔	↔↔	↔	↔	
Volume (vph)	1299	30	40	984	171	228	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0	225	0	0	150	0	
Storage Lanes	0	1	1	1	1	1	
Taper Length (ft)	25	25	25	25	25	25	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00	
Flt Protected	0.997		0.950		0.950	0.850	
Satd. Flow (prot)	3529	0	1770	3539	1770	1583	
Flt Permitted	0.950		0.950		0.950		
Satd. Flow (perm)	3529	0	1770	3539	1770	1583	
Link Speed (mph)	45		45		30		
Link Distance (ft)	1000		928		337		
Travel Time (s)	15.2		14.1		7.7		
Adj. Flow (vph)	1412	33	43	1070	186	248	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	1445	0	43	1070	186	248	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Left	Left	Right	
Median Width(ft)	12		12		12		
Link Offset(ft)	0		0		0		
Crosswalk Width(ft)	16		16		16		
Two way Left Turn Lane	Yes		Yes		Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	9	15	15	15	15	9	
Sign Control	Free	Free	Free	Free	Stop	Stop	
Intersection Summary							
Area Type:	Other						
Control Type:	Unsignalized						
Intersection Capacity Utilization	57.6%						
Analysis Period (min)	15						
	ICU Level of Service: B						

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
56: Maple Road & Proposed North Driveway 4/24/2014

	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	↔↔	↔	↔↔	↔↔	↔	↔	
Volume (veh/h)	1299	30	40	984	171	228	
Sign Control	Free	Free	Free	Free	Stop	Stop	
Grade	0%		0%		0%		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	1412	33	43	1070	186	248	
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)						6	
Median type			TW/TL				
Median storage (veh)	2				2		
Upstream signal (ft)							
pX, platoon unblocked			1445		2050	722	
vC, conflicting volume					1428		
vC1, stage 1 conf vol					622		
vC2, stage 2 conf vol			1445		2050	722	
vCu, unblocked vol			4.1		6.8	6.9	
IC, single (s)					5.8		
IC, 2 stage (s)							
IF (s)			2.2		3.5	3.3	
p0 queue free %			91		0	33	
cM capacity (veh/h)			465		171	369	
Direction, Lane #							
	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	941	503	43	535	535	434	
Volume Left	0	0	43	0	0	186	
Volume Right	0	33	0	0	0	248	
cSH	1700	1700	465	1700	1700	348	
Volume to Capacity	0.55	0.30	0.09	0.31	0.31	1.25	
Queue Length 95th (ft)	0	0	8	0	0	480	
Control Delay (s)	0.0	0.0	13.5	0.0	0.0	164.9	
Lane LOS			B			F	
Approach Delay (s)	0.0	0.5				164.9	
Approach LOS						F	
Intersection Summary							
Average Delay	24.1						
Intersection Capacity Utilization	57.6%						
Analysis Period (min)	15						
	ICU Level of Service: B						

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
59: Sheridan Drive & Proposed Access Driveway

4/24/2014



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	10	1748	1616	30	34	57
Volume (vph)	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	75	0	0	0	0	0
Storage Length (ft)	1	0	1	0	1	0
Storage Lanes	25	25	25	25	25	25
Taper Length (ft)	1.00	0.95	0.95	1.00	1.00	1.00
Lane Util. Factor		0.997	0.982		0.915	
Flt Protected	0.950				0.982	
Satd. Flow (prot)	1770	3539	3529	0	1674	0
Flt Permitted	0.950				0.982	
Satd. Flow (perm)	1770	3539	3529	0	1674	0
Link Speed (mph)	45	45	45	30	30	30
Link Distance (ft)	697	971	971	280	280	280
Travel Time (s)	10.6	14.7	14.7	6.4	6.4	6.4
Adj. Flow (vph)	11	1900	1757	33	37	62
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	No	Yes	Yes	No	No	No
Enter Blocked Intersection	No	Yes	Yes	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right
Median Width(ft)	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	Free	Free	9	15	9
Sign Control	Free	Free	Free	Stop	Stop	Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	60.4%					
Analysis Period (min)	15					
ICU Level of Service:	B					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
59: Sheridan Drive & Proposed Access Driveway

4/24/2014



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	10	1748	1616	30	34	57
Volume (veh/h)	1900	1900	1900	1900	1900	1900
Sign Control	Free	Free	Free	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	1900	1757	33	37	62
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL TWLTL					
Median storage (veh)	2 2					
Upstream signal (ft)	971					
pX, platoon unblocked	0.66					
vc, conflicting volume	1789					
vc1, stage 1 conf vol	1773					
vc2, stage 2 conf vol	972					
vCu, unblocked vol	1162					
IC, single (s)	4.1					
IC, 2 stage (s)	5.8					
IF (s)	2.2					
p0 queue free %	97					
cM capacity (veh/h)	393					
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	11	950	950	1171	618	99
Volume Left	11	0	0	0	0	37
Volume Right	0	0	0	0	33	62
cSH	393	1700	1700	1700	1700	293
Volume to Capacity	0.03	0.56	0.56	0.69	0.36	0.34
Queue Length 95th (ft)	2	0	0	0	0	36
Control Delay (s)	14.4	0.0	0.0	0.0	0.0	23.5
Lane LOS	B					C
Approach Delay (s)	0.1			0.0		23.5
Approach LOS				C		C
Intersection Summary						
Average Delay	0.7					
Intersection Capacity Utilization	60.4%					
ICU Level of Service	B					
Analysis Period (min)	15					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
1: Maple Road & Millersport Hwy SB

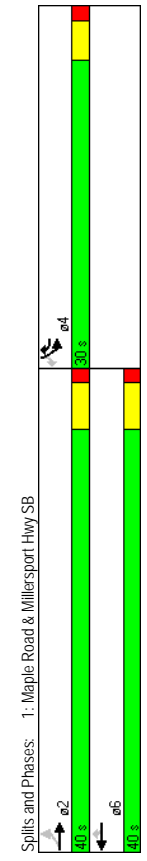
4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	18	614	832	312	32	83
Volume (vph)	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	150	150	0	0	0	0
Storage Length (ft)	1	1	1	1	1	1
Storage Lanes	35	100	25	25	25	25
Taper Length (ft)	1.00	0.95	1.00	1.00	1.00	1.00
Lane Util. Factor	0.950	0.850	0.950	0.850	0.950	0.850
Flt Protected	1770	3539	1583	1770	1583	1583
Satd. Flow (prot)	0.322	0.950	0.950	0.950	0.950	0.950
Flt Permitted	600	3539	1583	1770	1583	1583
Satd. Flow (perm)	45	45	45	30	30	30
Right Turn on Red	555	654	281	281	281	281
Satd. Flow (RTOR)	8.4	9.9	6.4	6.4	6.4	6.4
Link Speed (mph)	0.91	0.91	0.96	0.96	0.78	0.78
Link Distance (ft)	20	675	867	325	41	106
Travel Time (s)	20	675	867	325	41	106
Peak Hour Factor	20	675	867	325	41	106
Adj. Flow (vph)	20	675	867	325	41	106
Shared Lane Traffic (%)	No	No	No	No	No	No
Lane Group Flow (vph)	Left	Left	Right	Right	Left	Right
Enter Blocked Intersection	12	12	12	12	12	12
Lane Alignment	0	0	0	0	0	0
Median Width(ft)	16	16	16	16	16	16
Link Offset(ft)	Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes
Crosswalk Width(ft)	1.00	1.00	1.00	1.00	1.00	1.00
Headway Factor	15	2	2	1	1	1
Turning Speed (mph)	Left	Thru	Right	Left	Right	Right
Number of Detectors	20	100	100	20	20	20
Detector Template	0	0	0	0	0	0
Leading Detector (ft)	0	0	0	0	0	0
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	20	6	6	20	20	20
Detector 1 Size(ft)	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 1 Type	Detector 1 Channel	Detector 1 Extend (s)	Detector 1 Queue (s)	Detector 1 Delay (s)	Detector 2 Position(ft)	Detector 2 Size(ft)
Detector 2 Position(ft)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Size(ft)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Type	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Channel	94	94	6	6	6	6
Detector 2 Extend (s)	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Turn Type	Perm	Perm	pm+ov	Perm	Perm	Perm
Protected Phases	2	2	6	6	4	4
Permitted Phases	2	2	6	6	4	4
Detector Phase	2	2	6	6	4	4

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
1: Maple Road & Millersport Hwy SB

4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Switch Phase	4.0	4.0	4.0	1.0	1.0	1.0
Minimum Initial (s)	9.1	9.1	9.1	6.2	6.2	6.2
Minimum Split (s)	40.0	40.0	40.0	30.0	30.0	30.0
Total Split (s)	57.1%	57.1%	57.1%	42.9%	42.9%	42.9%
Total Split (%)	34.9	34.9	34.9	25.4	25.4	25.4
Maximum Green (s)	3.9	3.9	3.9	3.2	3.2	3.2
Yellow Time (s)	1.2	1.2	1.2	1.4	1.4	1.4
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	5.1	5.1	5.1	4.6	4.6	4.6
Total Lost Time (s)	Lead-Lag Optimize?	3.0	3.0	3.0	3.0	3.0
Lead-Lag Optimize?	Vehicle Extension (s)	None	None	None	None	None
Vehicle Extension (s)	Recall Mode	52.7	52.7	7.0	7.6	7.6
Recall Mode	Act Effct Green (s)	0.75	0.75	1.00	0.11	0.11
Act Effct Green (s)	Actuated g/C Ratio	0.04	0.25	0.33	0.21	0.40
Actuated g/C Ratio	v/c Ratio	2.9	3.1	5.9	0.3	30.3
v/c Ratio	Control Delay	0.0	0.0	0.0	0.0	0.0
Control Delay	Queue Delay	2.9	3.1	5.9	0.3	30.3
Queue Delay	Total Delay	A	A	A	A	C
Total Delay	LOS	3.1	4.4	16.6	B	B
LOS	Approach Delay	A	A	A	B	B
Approach Delay	Approach LOS	A	A	A	B	B
Approach LOS	Intersection Summary					
Intersection Summary	Area Type:	Other				
Area Type:	Cycle Length:	70				
Cycle Length:	Actuated Cycle Length:	70				
Actuated Cycle Length:	Offset:	5 (7%), Referenced to phase 2:EBTL and 6:WBT. Start of Green				
Offset:	Natural Cycle:	40				
Natural Cycle:	Control Type:	Actuated-Coordinated				
Control Type:	Maximum v/c Ratio:	0.40				
Maximum v/c Ratio:	Intersection Signal Delay:	4.8				
Intersection Signal Delay:	Intersection LOS:	A				
Intersection LOS:	Intersection Capacity Utilization:	36.2%				
Intersection Capacity Utilization:	Analysis Period (min):	15				
Analysis Period (min):	Splits and Phases: 1: Maple Road & Millersport Hwy SB					



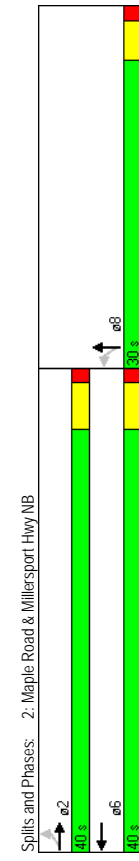
Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
 2: Maple Road & Millersport Hwy NB
 4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	42	603	0	0	997	57	147	1	466	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	0	0	0	0	0	0	0	0	0
Storage Lanes	1	0	0	0	0	1	0	0	0	0	0
Taper Length (ft)	50	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.950				0.992		0.850				
Satd. Flow (prot)	1770	3539	0	0	3511	0	1770	1583	0	0	0
Flt Permitted	0.185				0.950		0.950				
Satd. Flow (perm)	345	3539	0	0	3511	0	1770	1583	0	0	0
Right Turn on Red		Yes			Yes		Yes	Yes			Yes
Satd. Flow (RTOR)		12			12		169				30
Link Speed (mph)		45			45		30				263
Link Distance (ft)		654			1770		319				7.3
Travel Time (s)		9.9			26.8		7.3				6.0
Peak Hour Factor	0.85	0.85	0.85	0.93	0.93	0.93	0.93	0.93	0.93	0.92	0.92
Adj. Flow (vph)	49	709	0	0	1072	61	158	1	501	0	0
Shared Lane Traffic (%)											
Lane Group Flow (vph)	49	709	0	0	1133	0	158	502	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Left	Right	Left	Right
Median Width(ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9	15	9	15	9	15
Number of Detectors	1	2	2	2	2	2	1	2	2	2	2
Detector Template	Left	Thru	Thru	Left	Thru	Thru	Left	Thru	Left	Thru	Thru
Leading Detector (ft)	20	100	100	100	100	20	100	100	100	100	100
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	6	6	20	6	6	6	6	6
Detector 1 Type	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94	94	94	94	94	94	94	94	94	94	94
Detector 2 Size(ft)	6	6	6	6	6	6	6	6	6	6	6
Detector 2 Type	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 2 Channel											
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm
Protected Phases	2	2	2	2	2	2	2	2	2	2	2
Permitted Phases	2	2	2	2	2	2	2	2	2	2	2
Detector Phase	2	2	2	2	2	2	2	2	2	2	2

Lanes, Volumes, Timings
 SRF & Associates
 Alternative 5
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
 2: Maple Road & Millersport Hwy NB
 4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	1.0	1.0	1.0	4.0	4.0	4.0	1.0	1.0	1.0	1.0	1.0
Minimum Split (s)	6.1	6.1	6.1	9.1	9.1	9.1	6.2	6.2	6.2	6.2	6.2
Total Split (s)	40.0	40.0	40.0	0.0	0.0	0.0	30.0	30.0	30.0	0.0	0.0
Total Split (%)	57.1%	57.1%	57.1%	0.0%	0.0%	0.0%	42.9%	42.9%	42.9%	0.0%	0.0%
Maximum Green (s)	34.9	34.9	34.9	34.9	34.9	34.9	25.4	25.4	25.4	25.4	25.4
Yellow Time (s)	3.9	3.9	3.9	3.9	3.9	3.9	3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.2	1.2	1.2	1.2	1.2	1.2	1.4	1.4	1.4	1.4	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	4.0	4.0	4.0	4.6	4.6	4.6	4.0	4.0
Lead-Lag											
Lead-Lag Optimize?											
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	None	None	None	None	None
Recall Mode	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min
Act Effct Green (s)	39.0	39.0	39.0	39.0	39.0	39.0	21.3	21.3	21.3	21.3	21.3
Actuated g/C Ratio	0.56	0.56	0.56	0.56	0.56	0.56	0.30	0.30	0.30	0.30	0.30
v/c Ratio	0.26	0.36	0.36	0.58	0.58	0.58	0.29	0.29	0.29	0.84	0.84
Control Delay	15.8	10.7	10.7	12.6	12.6	12.6	18.6	18.6	18.6	27.7	27.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.8	10.7	10.7	12.6	12.6	12.6	18.6	18.6	18.6	27.7	27.7
LOS	B	B	B	B	B	B	B	B	B	C	C
Approach Delay	B	B	B	B	B	B	B	B	B	C	C
Approach LOS	B	B	B	B	B	B	B	B	B	C	C
Intersection Summary											
Area Type:	Other										
Cycle Length:	70										
Actuated Cycle Length:	70										
Offset:	5 (7%), Referenced to phase 2:EBTL and 6:WBT, Start of Green										
Natural Cycle:	50										
Control Type:	Actuated-Coordinated										
Maximum v/c Ratio:	0.84										
Intersection Signal Delay:	15.5										
Intersection LOS:	B										
Intersection Capacity Utilization:	71.9%										
Analysis Period (min):	15										



Splits and Phases: 2: Maple Road & Millersport Hwy NB

Lanes, Volumes, Timings
 SRF & Associates
 Alternative 5
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
3: Maple Road & Maplemere Road

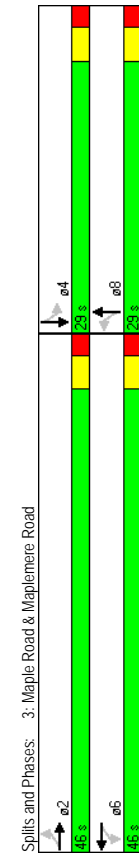
4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	21	934	46	12	1045	28	47	3	16	34	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	70	0	0	0	0	0	0	0	0
Storage Lanes	1	0	1	0	0	0	0	0	0	0	0
Taper Length (ft)	50	25	50	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Flt	0.993			0.996				0.967			0.957
Flt Permitted	0.950		0.950					0.966			0.967
Satd. Flow (prot)	1770	3514	0	1770	3525	0	1740	0	1740	0	1724
Flt Permitted	0.203		0.215					0.735			0.746
Right Turn on Red	378	3514	0	400	3525	0	1324	0	1330	0	1330
Right Turn (RTOR)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Satd. Flow (RTOR)	10		6				23		28		28
Link Speed (mph)	45		45				30		30		30
Link Distance (ft)	1770		1106				378		402		402
Travel Time (s)	26.8		16.8				8.6		9.1		9.1
Peak Hour Factor	0.86	0.86	0.86	0.91	0.91	0.91	0.60	0.60	0.60	0.58	0.58
Adj. Flow (vph)	24	1086	53	13	1148	31	78	5	27	59	28
Shared Lane Traffic (%)	24	1139	0	13	1179	0	110	0	110	0	87
Lane Group Flow (vph)	No	No	No	No	No	No	No	No	No	No	No
Enter Blocked Intersection	Left	Left	Right	Left	Right	Left	Left	Right	Left	Right	Right
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Right	Right
Median Width(ft)	12	0	12	0	0	0	0	0	0	0	0
Link Offset(ft)	16	0	16	0	0	0	16	0	16	0	16
Crosswalk Width(ft)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9	15	9	15	15	9
Number of Detectors	1	2	1	2	1	2	1	2	1	2	2
Detector Template	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Thru
Leading Detector (ft)	20	100	20	100	20	100	20	100	20	100	100
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	6	20	6	20	6	20	6	6
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94		94		94		94		94		94
Detector 2 Size(ft)	6		6		6		6		6		6
Detector 2 Type	CI+EX		CI+EX		CI+EX		CI+EX		CI+EX		CI+EX
Detector 2 Channel											
Detector 2 Extend (s)	0.0		0.0		0.0		0.0		0.0		0.0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm
Protected Phases	2		6		6		8		8		4
Permitted Phases	2		6		6		8		8		4
Detector Phase	2		6		6		8		8		4

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
3: Maple Road & Maplemere Road

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	9.0	9.0	9.0	9.0	9.0	27.0	27.0	27.0	27.0	27.0
Total Split (s)	46.0	46.0	0.0	46.0	46.0	0.0	29.0	29.0	0.0	29.0	29.0
Total Split (%)	61.3%	61.3%	0.0%	61.3%	61.3%	0.0%	38.7%	38.7%	0.0%	38.7%	38.7%
Maximum Green (s)	41.0	41.0	41.0	41.0	41.0	41.0	24.0	24.0	24.0	24.0	24.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Lead-Lag Optimize?											
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	None	None	None	None	None
Recall Mode	Min	Min	Min	Min	Min	Min	None	None	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	15.0	15.0	15.0	15.0	15.0
Flash Dont Walk (s)											
Pedestrian Calls (#/hr)							0	0	0	0	0
Act Effct Green (s)	27.6	27.6	27.6	27.6	27.6	27.6	8.7	8.7	8.7	8.6	8.6
Actuated g/C Ratio	0.65	0.65	0.65	0.65	0.65	0.65	0.21	0.21	0.21	0.20	0.20
v/c Ratio	0.10	0.50	0.05	0.51	0.05	0.51	0.38	0.38	0.38	0.30	0.30
Control Delay	6.3	6.7	5.6	6.9	5.6	6.9	17.3	17.3	17.3	14.7	14.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.3	6.7	5.6	6.9	5.6	6.9	17.3	17.3	17.3	14.7	14.7
LOS	A	A	A	A	A	A	B	B	B	B	B
Approach Delay	6.7	6.7	6.9	6.9	6.9	6.9	17.3	17.3	17.3	14.7	14.7
Approach LOS	A	A	A	A	A	A	B	B	B	B	B
Intersection Summary	Other										
Area Type:	Other										
Cycle Length:	75										
Actuated Cycle Length:	42.4										
Natural Cycle:	55										
Control Type:	Actuated-Uncoordinated										
Maximum v/c Ratio:	0.51										
Intersection Signal Delay:	7.5										
Intersection Capacity Utilization:	42.5%										
Analysis Period (min):	15										



Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
4: Maple Road & Donna Lea Blvd

4/24/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔↔	↔↔	↔↔	↔↔	↔↔
Volume (vph)	979	6	13	1060	24	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	50	0	0	0	0
Storage Lanes	0	1	0	1	0	0
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Flt Protected	0.999		0.950		0.904	
Flt Permitted			0.950		0.986	
Satd. Flow (prot)	3536	0	1770	3539	1660	0
Satd. Flow (perm)	3536	0	1770	3539	1660	0
Link Speed (mph)	45		45		30	
Link Distance (ft)	1106		1002		355	
Travel Time (s)	16.8		15.2		8.1	
Peak Hour Factor	0.79	0.79	0.87	0.87	0.76	0.76
Adj. Flow (vph)	1239	8	15	1218	32	80
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1247	0	15	1218	112	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12		12		12	
Link Offset(ft)	0		0		0	
Crosswalk Width(ft)	16		16		16	
Two way Left Turn Lane	Yes		Yes		Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15	15	15	15	9
Sign Control	Free	Free	Free	Free	Stop	Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	41.1%					
Analysis Period (min)	15					
ICU Level of Service:	A					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
4: Maple Road & Donna Lea Blvd

4/24/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔↔	↔↔	↔↔	↔↔	↔↔
Volume (veh/h)	979	6	13	1060	24	61
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%		0%		0%	
Peak Hour Factor	0.79	0.79	0.87	0.87	0.76	0.76
Hourly flow rate (vph)	1239	8	15	1218	32	80
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLT		TWLT		2	
Median storage (veh)	2		2		2	
Upstream signal (ft)	1106		1106		639	
pX, platoon unblocked			0.85		0.85	0.85
vC, conflicting volume			1247		1882	623
vC1, stage 1 conf vol					1243	
vC2, stage 2 conf vol					639	
vCu, unblocked vol			925		1677	188
IC, single (s)			4.1		6.8	6.9
IC, 2 stage (s)					5.8	
IF (s)			2.2		3.5	3.3
p0 queue free %			98		87	88
cM capacity (veh/h)			620		252	695
Direction, Lane #						
EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	NB 2
826	421	15	609	609	112	112
Volume Total						
Volume Left	0	0	15	0	0	32
Volume Right	0	8	0	0	0	80
cSH	1700	1700	620	1700	1700	464
Volume to Capacity	0.49	0.25	0.02	0.36	0.36	0.24
Queue Length 95th (ft)	0	0	2	0	0	23
Control Delay (s)	0.0	0.0	10.9	0.0	0.0	15.2
Lane LOS			B		C	C
Approach Delay (s)	0.0		0.1		15.2	
Approach LOS			C		C	
Intersection Summary						
Average Delay	0.7					
Intersection Capacity Utilization	41.1%					
ICU Level of Service	A					
Analysis Period (min)	15					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
5: Maple Road & Audubon Golf Club

4/24/2014



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	1	1068	4	1	1127	2	13	0	0	3	0
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	100	0	50	0	0	0	0	0	0	0	0
Storage Length (ft)	1	0	1	0	0	0	0	0	0	0	0
Storage Lanes	25	25	25	25	25	25	25	25	25	25	25
Taper Length (ft)	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.999					0.976					
Flt Protected	0.950		0.950		0.960		0.960		0.950		0.950
Satd. Flow (prot)	1770	3536	0	1770	3539	0	1745	0	1745	0	1770
Flt Permitted	0.950		0.950		0.960		0.960		0.950		0.950
Satd. Flow (perm)	1770	3536	0	1770	3539	0	1745	0	1745	0	1770
Link Speed (mph)	45	45	45	45	45	45	30	30	30	30	30
Link Distance (ft)	446	446	446	446	446	446	469	469	469	469	469
Travel Time (s)	6.8	6.8	8.4	8.4	8.4	10.7	10.7	10.7	10.7	10.7	2.5
Adj. Flow (vph)	1	1161	4	1	1225	2	14	0	3	1	0
Shared Lane Traffic (%)	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Lane Group Flow (vph)	1	1165	0	1	1227	0	0	17	0	0	1
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Right
Median Width (ft)	12	12	12	12	12	12	0	0	0	0	0
Link Offset (ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width (ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane	Yes		Yes		Yes		Yes		Yes		Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9	15	9	15	9	15
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	41.2%
Analysis Period (min)	15

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
5: Maple Road & Audubon Golf Club

4/24/2014



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	1	1068	4	1	1127	2	13	0	3	1	0
Volume (veh/h)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	1161	4	1	1225	2	14	0	3	1	0
Pedestrians											
Lane Width (ft)											
Walking Speed (ft/s)											
Percent Blockage											
Right turn flare (veh)											
Median type	TWLT			TWLT							
Median storage (veh)	2			2							
Upstream signal (ft)											
pX, platoon unblocked											
vC, conflicting volume	1227		1165				1780	2395	583	1814	2396
vC1, stage 1 conf vol							1165	1165	1228	1228	1228
vC2, stage 2 conf vol							615	1229	586	1167	1167
vCu, unblocked vol	1227		1165				1780	2395	583	1814	2396
IC, single (s)	4.1		4.1				7.5	6.5	6.9	7.5	6.5
IC, 2 stage (s)							6.5	5.5	5.5	6.5	5.5
IF (s)	2.2		2.2				3.5	4.0	3.3	3.5	4.0
p0 queue free %	100		100				92	100	99	99	100
cM capacity (veh/h)	564		595				186	177	456	173	177

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	1	774	391	1	817	411	17	1
Volume Left	1	0	0	1	0	0	14	1
Volume Right	0	0	4	0	0	2	3	0
cSH	564	1700	1700	595	1700	1700	209	173
Volume to Capacity	0.00	0.46	0.23	0.00	0.48	0.24	0.08	0.01
Queue Length 95th (ft)	0	0	0	0	0	0	7	0
Control Delay (s)	11.4	0.0	0.0	11.1	0.0	0.0	23.8	26.0
Lane LOS	B			B			C	D
Approach Delay (s)	0.0			0.0			23.8	26.0
Approach LOS				C			C	D

Intersection Summary	Average Delay	Intersection Capacity Utilization	Analysis Period (min)
	0.2	41.2%	15
		ICU Level of Service	A

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
 6: Maple Road & North Forest Road

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	102	865	77	255	838	90	90	232	189	123	364
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	415	220	315	220	315	150	125	220	250	250	250
Storage Lanes	1	1	1	1	1	1	1	1	1	1	1
Taper Length (ft)	90	115	60	60	25	95	25	95	25	90	25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Fit	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850
Flt Protected	0.950		0.950		0.950	0.950		0.950		0.950	
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1863	1583	1770	1863
Flt Permitted	0.246		0.098		0.197		0.352		0.352		0.352
Satd. Flow (perm)	458	3539	1583	183	3539	1583	367	1863	1583	656	1863
Right Turn on Red	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Satd. Flow (RTOR)	84		84		84		53		53		76
Link Speed (mph)	45		45		45		35		35		35
Link Distance (ft)	1705		820		529		608		608		608
Travel Time (s)	25.8		12.4		10.3		11.8		11.8		11.8
Peak Hour Factor	0.90	0.90	0.95	0.95	0.95	0.90	0.90	0.90	0.90	0.80	0.80
Adj. Flow (vph)	113	961	86	268	882	95	100	258	210	154	455
Shared Lane Traffic (%)	113	961	86	268	882	95	100	258	210	154	455
Lane Group Flow (vph)	No	No	No	No	No	No	No	No	No	No	No
Enter Blocked Intersection	Left	Left	Right	Left	Right	Left	Left	Left	Right	Left	Right
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Left	Right	Left	Right
Median Width (ft)	12		12		12		12		12		12
Link Offset (ft)	0		0		0		0		0		0
Crosswalk Width (ft)	16		16		16		16		16		16
Two way Left Turn Lane	Yes		Yes		Yes		Yes		Yes		Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	2	1	2	1	2	1	1	2
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru
Leading Detector (ft)	20	100	20	100	20	100	20	100	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size (ft)	20	6	20	6	20	6	20	6	20	6	20
Detector 1 Type	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position (ft)	94		94		94		94		94		94
Detector 2 Size (ft)	6		6		6		6		6		6
Detector 2 Type	Ch+Ex		Ch+Ex		Ch+Ex		Ch+Ex		Ch+Ex		Ch+Ex
Detector 2 Channel											
Detector 2 Extend (s)	0.0		0.0		0.0		0.0		0.0		0.0
Turn Type	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt
Protected Phases	5	2	3	1	6	7	3	8	1	7	4
Permitted Phases	2	2	2	6	6	6	8	8	4	4	4
Detector Phase	5	2	3	1	6	7	3	8	1	7	4

Lanes, Volumes, Timings
 SRF & Associates
 Alternative 5
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
 6: Maple Road & North Forest Road

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	1.0	4.0	1.0	1.0	4.0	1.0	1.0	4.0	1.0	1.0	4.0
Minimum Split (s)	7.0	35.0	7.0	7.0	35.0	7.0	7.0	35.0	7.0	7.0	35.0
Total Split (s)	13.0	45.0	10.0	23.0	55.0	15.0	10.0	37.0	23.0	15.0	42.0
Total Split (%)	10.8%	37.5%	8.3%	19.2%	45.8%	12.5%	8.3%	30.8%	19.2%	12.5%	35.0%
Maximum Green (s)	7.0	39.0	4.0	17.0	49.0	9.0	4.0	31.0	17.0	9.0	36.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Walk Time (s)	7.0		7.0		7.0		7.0		7.0		7.0
Flash Dont Walk (s)	22.0		22.0		22.0		22.0		22.0		22.0
Pedestrian Calls (#/hr)	0		0		0		0		0		0
Act Effct Green (s)	41.7	34.7	44.9	56.2	43.4	58.4	30.1	26.0	47.8	39.7	30.8
Actuated g/C Ratio	0.38	0.32	0.41	0.51	0.40	0.53	0.27	0.24	0.44	0.36	0.28
v/c Ratio	0.44	0.86	0.12	0.83	0.63	0.11	0.65	0.59	0.29	0.47	0.87
Control Delay	21.5	44.7	5.5	49.9	29.2	13.9	49.6	43.8	16.2	29.9	56.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.5	44.7	5.5	49.9	29.2	13.9	49.6	43.8	16.2	29.9	56.5
LOS	C	D	A	D	C	B	D	D	B	C	E
Approach Delay	39.5		32.5		32.5		34.7		34.7		40.8
Approach LOS	D		C		C		C		C		D
Intersection Summary	Other										
Area Type:	Other										
Cycle Length:	120										
Actuated Cycle Length:	109.7										
Natural Cycle:	85										
Control Type:	Actuated-Uncoordinated										
Maximum v/c Ratio:	0.87										
Intersection Signal Delay:	36.8										
Intersection Capacity Utilization:	82.2%										
Analysis Period (min):	15										



Spills and Phases: ø: Maple Road & North Forest Road
 Lanes, Volumes, Timings
 SRF & Associates
 Alternative 5
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
7: Sheridan Drive & Mill Street

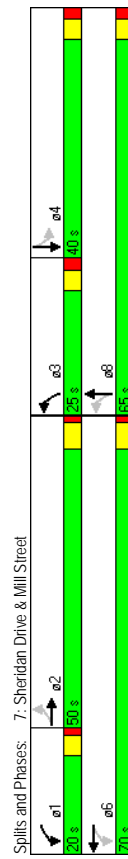
4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	6	1345	130	220	1063	9	106	21	125	30	146
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	100	0	150	0	150	0	40	0	75	0	75
Storage Length (ft)	1	0	1	0	1	0	0	1	0	1	0
Storage Lanes	65	25	60	25	60	25	25	25	25	25	25
Taper Length (ft)	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.987			0.999			0.872			0.983	
Flt Protected	0.950			0.950			0.950			0.950	
Satd. Flow (prot)	1770	3493	0	1770	3536	0	1770	1624	0	1770	1831
Flt Permitted	0.215			0.080			0.231			0.598	
Satd. Flow (perm)	400	3493	0	149	3536	0	430	1624	0	1114	1831
Right Turn on Red											
Satd. Flow (RTOR)				1			Yes		No		5
Link Speed (mph)	45			45			30		30		30
Link Distance (ft)	2782			977			838		362		362
Travel Time (s)	42.2			14.8			19.0		8.2		8.2
Peak Hour Factor	0.86	0.86	0.89	0.89	0.89	0.89	0.56	0.56	0.56	0.61	0.61
Adj. Flow (vph)	7	1564	151	247	1194	10	189	38	223	49	239
Shared Lane Traffic (%)											
Lane Group Flow (vph)	7	1715	0	247	1204	0	189	261	0	49	270
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left
Median Width(ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset(ft)	0			0			0		0		0
Crosswalk Width(ft)	16			16			16		16		16
Two way Left Turn Lane	Yes			Yes			Yes		Yes		Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9	15	9	15	9	15
Number of Detectors	1	2	1	2	1	2	1	2	1	2	1
Detector Template	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left
Leading Detector (ft)	20	100	20	100	20	100	20	100	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	6	20	6	20	6	20	6	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94	94	94	94	94	94	94	94	94	94	94
Detector 2 Size(ft)	6	6	6	6	6	6	6	6	6	6	6
Detector 2 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 2 Channel											
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	pm+pt	pm+pt	pm+pt	pm+pt	pm+pt	pm+pt	pm+pt	Perm	Perm	Perm
Protected Phases	2	2	6	6	6	3	8	8	4	4	4
Permitted Phases	2	2	1	1	1	6	3	8	4	4	4
Detector Phase	2	2	1	1	1	6	3	8	4	4	4

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
7: Sheridan Drive & Mill Street

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase	4.0	4.0		1.0	4.0		1.0	4.0		4.0	4.0
Minimum Initial (s)	28.3	28.3		6.2	28.3		6.2	34.2		34.2	34.2
Minimum Split (s)	50.0	50.0	0.0	20.0	70.0	0.0	25.0	65.0	0.0	40.0	40.0
Total Split (s)	37.0%	37.0%	0.0%	14.8%	51.9%	0.0%	18.5%	48.1%	0.0%	29.6%	29.6%
Total Split (%)	44.5	44.5		15.7	64.5		19.8	59.8		34.8	34.8
Maximum Green (s)	4.3	4.3		3.2	4.3		3.2	3.2		3.2	3.2
Yellow Time (s)	1.2	1.2		1.1	1.2		2.0	2.0		2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	5.5	5.5	4.0	4.3	5.5	4.0	5.2	5.2	4.0	5.2	5.2
Total Lost Time (s)	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lag	Lag	Lag
Lead/Lag	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Lead-Lag Optimize?	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0
Vehicle Extension (s)	Max	Max	None	Max	None	None	None	None	None	None	None
Recall Mode	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Walk Time (s)	15.0	15.0		15.0	15.0		22.0	22.0		22.0	22.0
Flash Dont Walk (s)	0	0		0	0		0	0		0	0
Pedestrian Calls (#/hr)	45.4	45.4		66.1	64.9		41.9	41.9		22.3	22.3
Act Effct Green (s)	0.39	0.39		0.56	0.55		0.36	0.36		0.19	0.19
Actuated g/C Ratio	0.05	1.27		0.84	0.62		0.60	0.45		0.23	0.77
v/c Ratio	28.8	160.6		54.8	21.1		34.6	31.0		43.2	59.5
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	288	160.6		54.8	21.1		34.6	31.0		43.2	59.5
Total Delay	C	F	D	C	C	C	C	C	C	D	E
LOS	Approach Delay	160.1		26.9			32.5			C	E
Approach LOS	F	F		C			C			C	E
Intersection Summary											
Area Type:	Other										
Cycle Length:	135										
Actuated Cycle Length:	117.6										
Natural Cycle:	140										
Control Type:	Semi Act-Uncoordinated										
Maximum v/c Ratio:	1.27										
Intersection Signal Delay:	88.1										
Intersection Capacity Utilization:	85.1%										
Analysis Period (min):	15										



Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
8: Sheridan Drive & North Forest Road

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	90	1329	217	181	1117	26	240	346	23	52	460
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	405	170	260	0	180	0	265	180	200	200	200
Storage Lanes	1	1	1	0	1	0	1	1	1	1	1
Taper Length (ft)	200	25	200	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95
Flt	0.850	0.850	0.997		0.850		0.850		0.850		0.850
Flt Protected	0.950		0.950		0.950		0.950		0.950		0.950
Satd. Flow (prot)	1770	3539	1583	1770	3529	0	1770	1863	1583	1770	3539
Flt Permitted	0.093		0.067		0.176		0.366		0.366		0.366
Satd. Flow (perm)	173	3539	1583	125	3529	0	328	1863	1583	682	3539
Right Turn on Red	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Satd. Flow (RTOR)	102		102		2		40	26	26		321
Link Speed (mph)	45		45		45		40	40	40		35
Link Distance (ft)	903		2219		33.6		547	9.3	9.3		354
Travel Time (s)	13.7		33.6		0.176		6.9	6.9	6.9		6.9
Peak Hour Factor	0.95	0.95	0.95	0.92	0.92	0.92	0.90	0.90	0.90	0.84	0.84
Adj. Flow (vph)	95	1399	228	197	1214	28	267	384	26	62	536
Shared Lane Traffic (%)											
Lane Group Flow (vph)	95	1399	228	197	1242	0	267	384	26	62	536
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Left	Right	Left	Right
Median Width(ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	2	9	15	15	9	15	15	9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru
Leading Detector (ft)	20	100	20	20	100	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	6	20	20	6	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94		94		94		94		94		94
Detector 2 Size(ft)	6		6		6		6		6		6
Detector 2 Type	CI+EX		CI+EX		CI+EX		CI+EX		CI+EX		CI+EX
Detector 2 Channel											
Detector 2 Extend (s)	0.0		0.0		0.0		0.0		0.0		0.0
Turn Type	pm+pt	Perm	pm+pt		pm+pt		Perm	pm+pt	Perm	pm+pt	Perm
Protected Phases	1	6	5	2	7	4	7	4	3	8	8
Permitted Phases	6	6	6	2	4	4	4	4	4	8	8
Detector Phase	1	6	6	5	2	7	4	4	3	8	8

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
8: Sheridan Drive & North Forest Road

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.3	27.9	27.9	8.3	27.9	8.3	27.9	27.9	27.9	8.3	27.9
Total Split (s)	30.0	60.0	60.0	20.0	50.0	0.0	25.0	40.0	40.0	20.0	35.0
Total Split (%)	21.4%	42.9%	42.9%	14.3%	35.7%	0.0%	17.9%	28.6%	28.6%	14.3%	25.0%
Maximum Green (s)	25.7	54.9	54.9	15.7	44.9		20.7	34.9	34.9	15.7	29.9
Yellow Time (s)	3.2	3.9	3.9	3.2	3.9		3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.1	1.2	1.2	1.1	1.2		1.1	1.9	1.9	1.1	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.3	5.1	5.1	4.3	5.1		4.3	5.1	5.1	4.3	5.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	None	Max	None		None	None	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0	15.0	15.0	15.0		15.0	15.0	15.0	15.0	15.0
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0	0	0	0
Act Effct Green (s)	65.1	55.1	55.1	73.9	60.0		50.5	39.2	39.2	35.3	26.1
Actuated g/C Ratio	0.49	0.41	0.41	0.55	0.45		0.38	0.29	0.29	0.26	0.20
v/c Ratio	0.49	0.96	0.32	0.81	0.78		0.80	0.70	0.05	0.25	0.78
Control Delay	25.2	54.2	16.6	58.0	36.6		49.6	51.1	12.7	30.1	10.8
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	25.2	54.2	16.6	58.0	36.6		49.6	51.1	12.7	30.1	10.8
LOS	C	D	B	E	D		D	D	B	C	E
Approach Delay	47.6			39.5			49.0				40.0
Approach LOS	D			D			D				D

Intersection Summary

Area Type:	Other
Cycle Length:	140
Actuated Cycle Length:	133.4
Natural Cycle:	105
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.96
Intersection Signal Delay:	43.9
Intersection Capacity Utilization:	88.2%
Analysis Period (min)	15



Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
10: Sheridan Drive & Proposed Access Driveway

4/24/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	156	1620	6	4	1530	69	16	0	9	50	0
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vpph)	350	0	75	0	0	0	0	0	0	0	0
Storage Length (ft)	1	0	1	0	0	0	0	0	0	0	1
Storage Lanes	25	25	25	25	25	25	25	25	25	25	25
Taper Length (ft)	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.999	0.999	0.994	0.951	0.969	0.951	0.951	0.951	0.951	0.951	0.850
Flt Protected	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950
Satd. Flow (prot)	1770	3536	0	1770	3518	0	0	1717	0	0	1770
Flt Permitted	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950
Satd. Flow (perm)	1770	3536	0	1770	3518	0	0	1717	0	0	1770
Link Speed (mph)	45	45	45	45	45	45	45	45	45	45	30
Link Distance (ft)	635	635	635	635	635	635	635	635	635	635	235
Travel Time (s)	9.6	11.6	11.6	6.3	6.3	6.3	6.3	6.3	6.3	6.3	5.3
Adj. Flow (vph)	0.88	0.88	0.88	0.90	0.90	0.90	0.69	0.69	0.69	0.92	0.92
Peak Hour Factor	177	1841	7	4	1700	77	23	0	13	54	0
Shared Lane Traffic (%)	177	1848	0	4	1777	0	0	36	0	0	54
Lane Group Flow (vph)	No	No	No	No	No	No	No	No	No	No	No
Enter Blocked Intersection	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left
Lane Alignment	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left
Median Width (ft)	12	12	12	12	12	12	12	12	12	12	0
Link Offset (ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width (ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9	15	9	15	9	15
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free	Stop
Intersection Summary											
Area Type:	Other										
Control Type:	Unsignalized										
Intersection Capacity Utilization	71.2%										
Analysis Period (min)	15										

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
10: Sheridan Drive & Proposed Access Driveway

4/24/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	156	1620	6	4	1530	69	16	0	9	50	0
Volume (veh/h)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free	Stop
Grade	0.88	0.88	0.88	0.90	0.90	0.90	0.69	0.69	0.69	0.92	0.92
Peak Hour Factor	177	1841	7	4	1700	77	23	0	13	54	0
Hourly flow rate (vph)	177	1841	7	4	1700	77	23	0	13	54	0
Pedestrians	177	1841	7	4	1700	77	23	0	13	54	0
Lane Width (ft)	177	1841	7	4	1700	77	23	0	13	54	0
Walking Speed (ft/s)	177	1841	7	4	1700	77	23	0	13	54	0
Percent Blockage	177	1841	7	4	1700	77	23	0	13	54	0
Right turn flare (veh)	177	1841	7	4	1700	77	23	0	13	54	0
Median type	177	1841	7	4	1700	77	23	0	13	54	0
Median storage (veh)	177	1841	7	4	1700	77	23	0	13	54	0
Upstream signal (ft)	177	1841	7	4	1700	77	23	0	13	54	0
pX, platoon unblocked	177	1841	7	4	1700	77	23	0	13	54	0
vC, conflicting volume	1777	1848	1848	1848	1848	1848	1848	1848	1848	1848	1848
vC1, stage 1 conf vol	1777	1848	1848	1848	1848	1848	1848	1848	1848	1848	1848
vC2, stage 2 conf vol	1777	1848	1848	1848	1848	1848	1848	1848	1848	1848	1848
vCu, unblocked vol	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
IC, single (s)	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
IC, 2 stage (s)	49	99	99	99	99	99	99	99	99	99	99
p0 queue free %	346	356	356	356	356	356	356	356	356	356	356
cM capacity (veh/h)	177	1841	7	4	1700	77	23	0	13	54	0
Direction, Lane #	EB1	EB2	EB3	WB1	WB2	WB3	NB1	SB1	SB2	SB2	SB2
Volume Total	177	1227	620	4	1133	643	36	54	136	136	136
Volume Left	177	0	0	4	0	0	23	54	0	0	0
cSH	346	1700	1700	356	1700	1700	1	73	287	287	287
Volume to Capacity	0.51	0.72	0.36	0.01	0.67	0.38	30.64	0.74	0.47	0.47	0.47
Queue Length 95th (ft)	70	0	0	1	0	0	Err	87	60	60	60
Control Delay (s)	258	0.0	0.0	15.2	0.0	0.0	Err	137.4	28.4	28.4	28.4
Lane LOS	D	C	C	C	C	C	F	F	F	D	D
Approach Delay (s)	2.3	0.0	0.0	0.0	0.0	0.0	Err	59.5	F	F	F
Approach LOS	D	C	C	C	C	C	F	F	F	D	D
Intersection Summary											
Average Delay	93.8										
Intersection Capacity Utilization	71.2%										
Analysis Period (min)	15										

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
11: Sheridan Drive & Frankhauser Road

4/24/2014

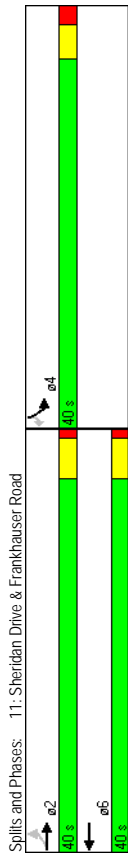
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (vph)	70	1736	1647	24	45	59
Ideal Flow (vppf)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105	0	0	0	0	50
Storage Lanes	1	0	0	1	1	1
Taper Length (ft)	65	25	25	25	25	25
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Flt Permitted	0.950	0.998			0.950	0.850
Satd. Flow (prot)	1770	3539	3532	0	1770	1583
Flt Permitted	0.099				0.950	
Satd. Flow (perm)	184	3539	3532	0	1770	1583
Right Turn on Red		Yes			Yes	Yes
Satd. Flow (RTOR)		2			4	
Link Speed (mph)	45	45	30		30	
Link Distance (ft)	101.4	635	825		825	
Travel Time (s)	15.4	9.6	18.8		18.8	
Peak Hour Factor	0.89	0.89	0.94	0.94	0.73	0.73
Adj. Flow (vph)	79	1951	1752	26	62	81
Shared Lane Traffic (%)						
Lane Group Flow (vph)	79	1951	1778	0	62	81
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Right
Median Width(ft)	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	2	2	9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Left	Right	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94	94	94	6	6	6
Detector 2 Size(ft)	6	6	6	6	6	6
Detector 2 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 2 Channel						
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm				Perm	Perm
Protected Phases	2	2	6	4	4	4
Permitted Phases	2	2	6	4	4	4
Detector Phase	2	2	6	4	4	4

Lanes, Volumes, Timings
SRF & Associates
Alternative 5
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
11: Sheridan Drive & Frankhauser Road

4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	1.0	1.0
Minimum Split (s)	40.0	40.0	40.0	40.0	31.1	31.1
Total Split (s)	40.0	40.0	40.0	40.0	40.0	40.0
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Maximum Green (s)	35.2	35.2	35.2	34.9	34.9	34.9
Yellow Time (s)	3.9	3.9	3.9	3.2	3.2	3.2
All-Red Time (s)	0.9	0.9	0.9	0.9	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.8	4.8	4.8	4.0	5.1	5.1
LeadLag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0	15.0	19.0	19.0	19.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effct Green (s)	63.9	63.9	63.9	9.3	9.3	9.3
Actuated g/C Ratio	0.80	0.80	0.80	0.12	0.12	0.12
v/c Ratio	0.54	0.69	0.63	0.30	0.43	0.43
Control Delay	23.9	6.9	6.0	35.0	37.4	37.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.9	6.9	6.0	35.0	37.4	37.4
LOS	C	A	A	C	C	D
Approach Delay		7.6	6.0		36.3	
Approach LOS		A	A		D	
Intersection Summary						
Area Type:	Other					
Cycle Length:	80					
Actuated Cycle Length:	80					
Offset:	76 (95%), Referenced to phase 2:EBTL and 6:WBT, Start of Green					
Natural Cycle:	100					
Control Type:	Actuated-Coordinated					
Maximum v/c Ratio:	0.69					
Intersection Signal Delay:	7.9					
Intersection Capacity Utilization:	65.8%					
Analysis Period (min):	15					



Lanes, Volumes, Timings
SRF & Associates
Alternative 5
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
12: Sheridan Drive & I-290 NB

4/24/2014

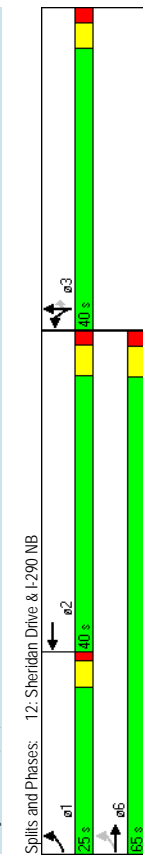
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	249	1564	0	1123	539	269	0	278	0	278	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	0	0	230	0	0	0	0	0	0
Storage Lanes	1	0	0	0	1	0	1	0	0	0	0
Taper Length (ft)	105	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.95	0.91	0.95	1.00	1.00	1.00
Flt Protected	0.950			0.951			0.916	0.850			
Satd. Flow (prot)	1770	5085	0	4836	0	1681	1519	1504	0	0	0
Flt Permitted	0.072			0.950			0.978				
Satd. Flow (perm)	134	5085	0	4836	0	1681	1519	1504	0	0	0
Right Turn on Red		Yes		Yes			Yes	Yes			Yes
Satd. Flow (RTOR)		122					19	19			30
Link Speed (mph)	45			45			30	30			30
Link Distance (ft)	197			193			830	423			423
Travel Time (s)	3.0			2.9			18.9	9.6			9.6
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.88	0.88	0.88	0.88	0.92	0.92
Adj. Flow (vph)	245	1664	0	1195	573	306	0	316	0	0	0
Shared Lane Traffic (%)				30%			37%				
Lane Group Flow (vph)	265	1664	0	1768	0	214	209	199	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane											
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9	15	9	15	9	15
Number of Detectors	1	2		2		1	2	1		1	
Detector Template	Left	Thru		Thru		Left	Thru	Right		Right	
Leading Detector (ft)	20	100		100		20	100	20		20	
Trailing Detector (ft)	0	0		0		0	0	0		0	
Detector 1 Position(ft)	0	0		0		0	0	0		0	
Detector 1 Size(ft)	20	6		6		20	6	20		6	
Detector 1 Type	Ch+Ex	Ch+Ex		Ch+Ex		Ch+Ex	Ch+Ex	Ch+Ex		Ch+Ex	
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0		0.0		0.0	0.0	0.0		0.0	
Detector 1 Queue (s)	0.0	0.0		0.0		0.0	0.0	0.0		0.0	
Detector 1 Delay (s)	0.0	0.0		0.0		0.0	0.0	0.0		0.0	
Detector 2 Position(ft)	94			94		94		94			
Detector 2 Size(ft)	6			6		6		6		6	
Detector 2 Type	Ch+Ex	Ch+Ex		Ch+Ex		Ch+Ex	Ch+Ex	Ch+Ex		Ch+Ex	
Detector 2 Channel											
Detector 2 Extend (s)	0.0	0.0		0.0		0.0	0.0	0.0		0.0	
Turn Type	pn+pt			custom		custom		Perm		Perm	
Protected Phases	1	6		2		3	3	3		3	
Permitted Phases	6			3		3	3	3		3	
Detector Phase	1	6		2		3	3	3		3	

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
12: Sheridan Drive & I-290 NB

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	1.0	4.0		4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	6.2	33.9		27.8		29.0	29.0	29.0	29.0	29.0	29.0
Total Split (s)	25.0	65.0	0.0	40.0	0.0	40.0	40.0	40.0	40.0	40.0	40.0
Total Split (%)	23.8%	61.9%	0.0%	38.1%	0.0%	38.1%	38.1%	38.1%	38.1%	38.1%	38.1%
Maximum Green (s)	20.7	59.1		34.2		34.8	34.8	34.8	34.8	34.8	34.8
Yellow Time (s)	3.2	3.9		3.9		3.2	3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.1	2.0		1.9		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.3	5.9	4.0	5.8	4.0	5.2	5.2	5.2	5.2	4.0	4.0
LeadLag	Lead	Lag		Lag		Lag		Lag		Lag	
Lead-Lag Optimize?	Yes	Yes		Yes		Yes		Yes		Yes	
Vehicle Extension (s)	2.0	3.0		3.0		2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	C-Max		C-Max		None	None	None	None	None	None
Walk Time (s)	7.0			7.0							
Flash Dont Walk (s)	21.0			15.0							
Pedestrian Calls (#/hr)	0			0							
Act Effct Green (s)	76.8	75.2		57.3		18.7	18.7	18.7	18.7	18.7	18.7
Actuated g/C Ratio	0.73	0.72		0.55		0.18	0.18	0.18	0.18	0.18	0.18
v/c Ratio	0.85	0.46		0.66		0.71	0.73	0.70	0.70	0.70	0.70
Control Delay	48.7	7.4		19.3		53.0	50.8	48.9	48.9	48.9	48.9
Queue Delay	0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.7	7.4		19.3		53.0	50.8	48.9	48.9	48.9	48.9
LOS	D	A		B		D	D	D	D	D	D
Approach Delay	13.1			19.3			50.9				
Approach LOS	B			B			B				



Lanes, Volumes, Timings
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
13: Sheridan Drive & Harlem Road

4/24/2014

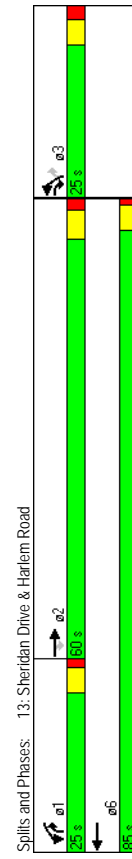
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔↔	↔↔	↔↔	↔↔	↔↔
Volume (vph)	911	315	522	870	285	902
Ideal Flow (vppf)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	215	0	140	0	0
Storage Lanes	1	1	1	2	2	2
Taper Length (ft)	230	100	100	100	25	25
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	0.88
Flt Protected	0.850		0.950		0.850	
Satd. Flow (prot)	3539	1583	3433	3539	3433	2787
Flt Permitted	0.950		0.950		0.950	
Satd. Flow (perm)	3539	1583	3433	3539	3433	2787
Right Turn on Red	No					Yes
Satd. Flow (RTOR)	45		45		35	106
Link Speed (mph)	314		413		338	
Link Distance (ft)	4.8		6.3		6.6	
Travel Time (s)	0.85	0.85	0.92	0.92	0.90	0.90
Peak Hour Factor	1072	371	567	946	317	1002
Adj. Flow (vph)	1072	371	567	946	317	1002
Lane Group Flow (vph)	No	No	No	No	No	No
Enter Blocked Intersection	Left	Right	Left	Left	Right	Right
Lane Alignment	12	24	24	24	24	24
Median Width(ft)	0	0	0	0	0	0
Link Offset(ft)	16		16		16	
Crosswalk Width(ft)	1.00	1.00	1.00	1.00	1.00	1.00
Two way Left Turn Lane	9	15	2	1	15	9
Headway Factor	2	1	1	2	1	1
Turning Speed (mph)	Thru	Right	Left	Thru	Left	Right
Number of Detectors	100	20	20	100	20	20
Detector Template	0	0	0	0	0	0
Leading Detector (ft)	6	20	20	6	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	6	20	20	6	20	20
Detector 1 Type	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 1 Channel	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94		94		94	
Detector 2 Size(ft)	6		6		6	
Detector 2 Type	Ch+Ex		Ch+Ex		Ch+Ex	
Detector 2 Channel	0.0		0.0		0.0	
Detector 2 Extend (s)	2	3	1	6	3	1
Turn Type	pm+ov	Prot				pm+ov
Protected Phases	2	3	1	6	3	1
Permitted Phases	2	3	1	6	3	1
Detector Phase	2	3	1	6	3	1

Lanes, Volumes, Timings
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
13: Sheridan Drive & Harlem Road

4/24/2014

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Switch Phase	↔	↔	↔	↔	↔	↔
Minimum Initial (s)	1.0	1.0	1.0	4.0	1.0	1.0
Minimum Split (s)	30.5	6.2	5.3	32.3	6.2	5.3
Total Split (s)	60.0	25.0	25.0	85.0	25.0	25.0
Total Split (%)	54.5%	22.7%	22.7%	77.3%	22.7%	22.7%
Maximum Green (s)	54.5	19.8	20.7	80.7	19.8	20.7
Yellow Time (s)	3.9	3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.6	2.0	1.1	1.1	2.0	1.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.2	4.3	4.3	5.2	4.3
Lead/Lag	Lag	Lead	Lead	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	C-Max	None	None	None	None	None
Walk Time (s)	7.0		7.0		7.0	
Flash Dont Walk (s)	18.0		21.0		18.0	
Pedestrian Calls (#/hr)	0		0		0	
Act Effct Green (s)	56.8	76.8	23.7	86.0	14.5	43.4
Actuated g/C Ratio	0.52	0.70	0.22	0.78	0.13	0.39
v/c Ratio	0.59	0.34	0.77	0.34	0.70	0.86
Control Delay	20.6	7.5	48.5	4.2	54.1	35.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.6	7.5	48.5	4.2	54.1	35.6
LOS	C	A	D	A	D	D
Approach Delay	17.2		20.8		40.1	
Approach LOS	B		C		D	



Lanes, Volumes, Timings
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Alternative 5
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
14: I-290 SB & Harlem Road

4/24/2014

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (vph)	298	746	479	21	413	392
Ideal Flow (vppf)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	0	0	330	0
Storage Lanes	1	1	0	0	1	0
Taper Length (ft)	25	25	25	25	75	25
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	3518	0	1770	3539
Flt Permitted	0.950				0.214	
Satd. Flow (perm)	1770	1583	3518	0	399	3539
Right Turn on Red	Yes	Yes	Yes	Yes	Yes	Yes
Satd. Flow (RTOR)	145	4				
Link Speed (mph)	30	35	35		35	35
Link Distance (ft)	333	250	456		456	456
Travel Time (s)	7.6	4.9	8.9		8.9	8.9
Peak Hour Factor	0.81	0.81	0.87	0.87	0.88	0.88
Adj. Flow (vph)	368	921	551	24	469	445
Shared Lane Traffic (%)						
Lane Group Flow (vph)	368	921	575	0	469	445
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width (ft)	12	12	12	12	12	12
Link Offset (ft)	0	0	0	0	0	0
Crosswalk Width (ft)	16	16	16	16	16	16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	9	9	15	15
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Left	Thru	Thru
Leading Detector (ft)	20	20	100	20	100	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position (ft)	0	0	0	0	0	0
Detector 1 Size (ft)	20	20	6	20	6	6
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position (ft)	0	0	94	0	94	94
Detector 2 Size (ft)	0	0	6	0	6	6
Detector 2 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 2 Channel						
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type		pm+ov			pm+pl	
Protected Phases	3	1	2	1	1	6
Permitted Phases	3	1	2	1	1	6
Detector Phase	3	1	2	1	1	6

Lanes, Volumes, Timings
SRF & Associates
Alternative 5
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
14: I-290 SB & Harlem Road

4/24/2014

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Switch Phase	↔	↔	↔	↔	↔	↔
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	9.2	30.6	9.2	21.0	21.0
Total Split (s)	40.0	35.0	50.0	0.0	35.0	85.0
Total Split (%)	32.0%	28.0%	40.0%	0.0%	28.0%	68.0%
Maximum Green (s)	35.2	30.7	45.0	30.7	80.0	80.0
Yellow Time (s)	3.2	3.2	3.6	3.2	3.6	3.6
All-Red Time (s)	1.6	1.1	1.4	1.1	1.4	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.8	4.3	5.0	4.0	4.3	5.0
Lead/Lag	Lead	Lead	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Min	None	None	None
Walk Time (s)	10.0		10.0			
Flash Dont Walk (s)	15.0		15.0			
Pedestrian Calls (#/hr)	0		0			
Act Effct Green (s)	23.8	58.4	21.1	56.0	55.2	55.2
Actuated g/C Ratio	0.27	0.66	0.24	0.63	0.62	0.62
v/c Ratio	0.78	0.85	0.69	0.66	0.20	0.20
Control Delay	43.3	19.8	36.2	19.0	8.3	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.3	19.8	36.2	19.0	8.3	8.3
LOS	D	B	D	B	A	A
Approach Delay	26.6	36.3	36.3	36.3	13.8	13.8
Approach LOS	C	D	D	D	B	B

Intersection Summary

Area Type: Other

Cycle Length: 125

Actuated Cycle Length: 89.1

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 24.4

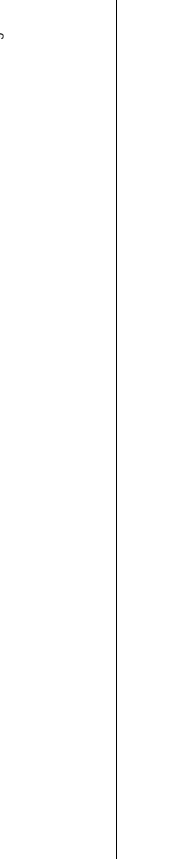
Intersection Capacity Utilization 67.9%

Analysis Period (min) 15

Intersection LOS: C

ICU Level of Service C

Splits and Phases: 14: I-290 SB & Harlem Road



Lanes, Volumes, Timings
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
15: Maple Road & Proposed North Driveway
4/24/2014

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔	↔↔	↔↔	↔	↔
Volume (veh/h)	977	64	114	1007	67	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	225	0	150	0	150
Storage Lanes	0	1	1	1	1	1
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Fit Protected	0.991		0.950		0.950	0.850
Satd. Flow (prot)	3507	0	1770	3539	1770	1583
Fit Permitted	0.950		0.950		0.950	0.950
Satd. Flow (perm)	3507	0	1770	3539	1770	1583
Link Speed (mph)	45		45		30	
Link Distance (ft)	1002		926		372	
Travel Time (s)	15.2		14.0		8.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1062	70	124	1095	73	109
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1132	0	124	1095	73	109
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12		12		12	
Link Offset(ft)	0		0		0	
Crosswalk Width(ft)	16		16		16	
Two way Left Turn Lane	Yes		Yes		Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15	15	15	15	9
Sign Control	Free	Free	Free	Free	Stop	Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	49.1%					
Analysis Period (min)	15					
ICU Level of Service:	A					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
15: Maple Road & Proposed North Driveway
4/24/2014

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔	↔↔	↔↔	↔	↔
Volume (veh/h)	977	64	114	1007	67	100
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%		0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1062	70	124	1095	73	109
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						6
Median type			TW/TL			
Median storage (veh)	2			2		
Upstream signal (ft)						
pX, platoon unblocked			1132		1892	566
vC, conflicting volume				1097		
vC1, stage 1 conf vol				795		
vC2, stage 2 conf vol			1132		1892	566
vCu, unblocked vol			4.1		6.8	6.9
IC, single (s)					5.8	
IC, 2 stage (s)						
IF (s)			2.2		3.5	3.3
p0 queue free %			80		66	77
cM capacity (veh/h)			613		211	468
Direction, Lane #						
EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	NB 2
708	424	124	547	547	182	182
Volume Total	0	0	124	0	0	73
Volume Left	0	70	0	0	0	109
Volume Right	1700	1700	613	1700	1700	527
cSH	0.42	0.25	0.20	0.32	0.32	0.34
Volume to Capacity	0	0	19	0	0	38
Queue Length 95th (ft)	0.0	0.0	12.4	0.0	0.0	21.3
Control Delay (s)			B			C
Lane LOS						
Approach Delay (s)	0.0		1.3			21.3
Approach LOS						C
Intersection Summary						
Average Delay	2.1					
Intersection Capacity Utilization	49.1%					
ICU Level of Service	A					
Analysis Period (min)	15					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
17: Proposed Access Road & Frankhauser Road

4/24/2014

	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Volume (vph)	37	0	50	44	0	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fit	0.936					
Fit Protected	0.950					
Satd. Flow (prot)	1770	0	1744	0	0	1863
Fit Permitted	0.950					
Satd. Flow (perm)	1770	0	1744	0	0	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	200		825			244
Travel Time (s)	4.5		18.8			5.5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	40	0	54	48	0	73
Shared Lane Traffic (%)						
Lane Group Flow (vph)	40	0	102	0	0	73
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	15
Sign Control	Stop	Free	Free	Free	Free	Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	15.3%					
Analysis Period (min)	15					
ICU Level of Service	A					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
17: Proposed Access Road & Frankhauser Road

4/24/2014

	WBL	WBR	NBT	NBR	SBL	SBT
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Volume (veh/h)	37	0	50	44	0	67
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%		0%		0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	40	0	54	48	0	73
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)			825			
pX, platoon unblocked						
VC, conflicting volume	151	78				102
VC1, stage 1 cont vol						
VC2, stage 2 cont vol						
vCu, unblocked vol	151	78				102
IC, single (s)	6.4	6.2				4.1
IC, 2 stage (s)						
IF (s)	3.5	3.3				2.2
p0 queue free %	95	100				100
cM capacity (veh/h)	841	982				1490
Direction, Lane #						
	WB 1	NB 1	SB 1			
Volume Total	40	102	73			
Volume Left	40	0	0			
Volume Right	0	48	0			
cSH	841	1700	1490			
Volume to Capacity	0.05	0.06	0.00			
Queue Length 95th (ft)	4	0	0			
Control Delay (s)	9.5	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	9.5	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay	1.8					
Intersection Capacity Utilization	15.3%					
ICU Level of Service	A					
Analysis Period (min)	15					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
52: Sheridan Drive & Proposed Access Driveway

4/24/2014



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	50	1630	1573	68	7	30
Volume (vph)	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	200	0	0	0	0	0
Storage Length (ft)	1	0	1	0	0	0
Storage Lanes	75	25	25	25	25	25
Taper Length (ft)	1.00	0.95	0.95	1.00	1.00	1.00
Lane Util. Factor		0.994	0.891			
Flt Protected	0.950					
Flt Permitted	1.770	3539	3518	0	1643	0
Satd. Flow (prot)	0.950					
Satd. Flow (perm)	1.770	3539	3518	0	1643	0
Link Speed (mph)	45	45	903	30		
Link Distance (ft)	765	903	432			
Travel Time (s)	11.6	13.7	98			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	54	1772	1710	74	8	33
Shared Lane Traffic (%)						
Lane Group Flow (vph)	54	1772	1784	0	41	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Right
Median Width(ft)	12	12	12	12		
Link Offset(ft)	0	0	0	0		
Crosswalk Width(ft)	16	16	16	16		
Two way Left Turn Lane	Yes	Yes				
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	Free	Free	9	15	9
Sign Control		Free	Free	Stop	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	55.6%					
Analysis Period (min)	15					
ICU Level of Service:	B					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
52: Sheridan Drive & Proposed Access Driveway

4/24/2014



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	50	1630	1573	68	7	30
Volume (veh/h)						
Sign Control		Free	Free	Stop	Stop	
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	54	1772	1710	74	8	33
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL TWLTL					
Median storage (veh)	2 2					
Upstream signal (ft)	903					
pX, platoon unblocked	0.70				0.70	0.70
vC, conflicting volume	1784				2741	892
vC1, stage 1 conf vol					1747	
vC2, stage 2 conf vol					995	
vCu, unblocked vol	1254				2629	0
IC, single (s)	4.1				6.8	6.9
IC, 2 stage (s)					5.8	
IF (s)	2.2				3.5	3.3
p0 queue free %	86				95	96
cM capacity (veh/h)	384				139	755
Direction, Lane #						
	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	54	886	886	1140	644	40
Volume Left	54	0	0	0	0	8
Volume Right	0	0	0	0	74	33
cSH	384	1700	1700	1700	1700	410
Volume to Capacity	0.14	0.52	0.52	0.67	0.38	0.10
Queue Length 95th (ft)	12	0	0	0	0	8
Control Delay (s)	15.9	0.0	0.0	0.0	0.0	14.7
Lane LOS	C					B
Approach Delay (s)	0.5			0.0		14.7
Approach LOS						B
Intersection Summary						
Average Delay	0.4					
Intersection Capacity Utilization	55.6%					
ICU Level of Service	B					
Analysis Period (min)	15					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
57: Proposed Access Driveway & North Forest Road

4/24/2014



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			4		
Volume (vph)	7	53	12	442	731	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fit	0.881			0.998		
Fit Protected	0.994			0.999		
Satd. Flow (prot)	1631	0	0	1861	1859	0
Fit Permitted	0.994			0.999		
Satd. Flow (perm)	1631	0	0	1861	1859	0
Link Speed (mph)	30			35	35	
Link Distance (ft)	258			205	169	
Travel Time (s)	5.9			4.0	3.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	8	58	13	480	795	15
Shared Lane Traffic (%)						
Lane Group Flow (vph)	66	0	0	493	810	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	Free	Free	9
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	49.6%					
Analysis Period (min)	15					
ICU Level of Service	A					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - AM Peak Hour
57: Proposed Access Driveway & North Forest Road

4/24/2014



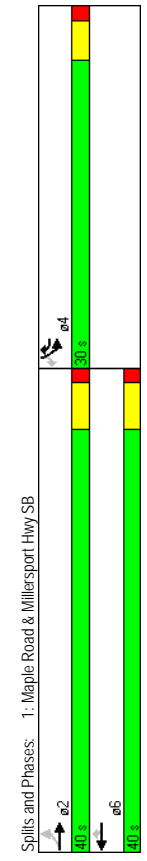
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			4		
Volume (veh/h)	7	53	12	442	731	14
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	8	58	13	480	795	15
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)				869		
pX, platoon unblocked	0.82					
vC, conflicting volume	1309	802	810			
vC1, stage 1 cont vol						
vC2, stage 2 cont vol						
vCu, unblocked vol	1266	802	810			
IC, single (s)	6.4	6.2	4.1			
IC, 2 stage (s)						
IF (s)	3.5	3.3	2.2			
p0 queue free %	95	85	98			
cM capacity (veh/h)	150	384	816			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	65	493	810			
Volume Left	8	13	0			
Volume Right	58	0	15			
cSH	325	816	1700			
Volume to Capacity	0.20	0.02	0.48			
Queue Length 95th (ft)	18	1	0			
Control Delay (s)	18.8	0.5	0.0			
Lane LOS	C	A				
Approach Delay (s)	18.8	0.5	0.0			
Approach LOS	C					
Intersection Summary						
Average Delay	1.1					
Intersection Capacity Utilization	49.6%					
ICU Level of Service	A					
Analysis Period (min)	15					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
 1: Maple Road & Millersport Hwy SB
 4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (vph)	29	997	920	230	61	174
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150			150	0	0
Storage Lanes	1			1	1	1
Taper Length (ft)	35			100	25	25
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Flt Protected	0.950			0.850	0.950	
Satd. Flow (prot)	1770	3539	3539	1583	1770	1583
Flt Permitted	0.264			0.950		
Satd. Flow (perm)	492	3539	3539	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)		45	45		30	75
Link Speed (mph)		555	654		281	
Link Distance (ft)		8.4	9.9		6.4	
Travel Time (s)		0.90	0.92	0.92	0.81	0.81
Peak Hour Factor		32	1108	1000	250	75
Adj. Flow (vph)		32	1108	1000	250	75
Shared Lane Traffic (%)						
Lane Group Flow (vph)	No	No	No	No	No	No
Enter Blocked Intersection	Left	Left	Right	Left	Right	Right
Lane Alignment	Left	Left	Right	Left	Right	Right
Median Width(ft)	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16
Two way Left Turn Lane		Yes				
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94	94	94			
Detector 2 Size(ft)	6	6	6			
Detector 2 Type	Ch+Ex	Ch+Ex	Ch+Ex			
Detector 2 Channel						
Detector 2 Extend (s)	0.0	0.0	0.0			
Turn Type	Perm			pm+ov		Perm
Protected Phases	2	6	6	4	4	
Permitted Phases	2	2	6	4	4	4
Detector Phase	2	2	6	4	4	4

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
 1: Maple Road & Millersport Hwy SB
 4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	1.0	1.0	1.0
Minimum Split (s)	9.1	9.1	9.1	6.2	6.2	6.2
Total Split (s)	40.0	40.0	40.0	30.0	30.0	30.0
Total Split (%)	57.1%	57.1%	57.1%	42.9%	42.9%	42.9%
Maximum Green (s)	34.9	34.9	34.9	25.4	25.4	25.4
Yellow Time (s)	3.9	3.9	3.9	3.2	3.2	3.2
All-Red Time (s)	1.2	1.2	1.2	1.4	1.4	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	4.6	4.6	4.6
Lead-Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Min	C-Min	C-Min	None	None	None
Act Effct Green (s)	48.3	48.3	48.3	7.0	12.0	12.0
Actuated g/C Ratio	0.69	0.69	0.69	1.00	0.17	0.17
v/c Ratio	0.09	0.45	0.41	0.16	0.25	0.64
Control Delay	6.0	6.4	8.5	0.2	24.9	25.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.0	6.4	8.5	0.2	24.9	25.5
LOS	A	A	A	A	C	C
Approach Delay						
Approach LOS	A	A	A	A	C	C
Intersection Summary						
Area Type:	Other					
Cycle Length:	70					
Actuated Cycle Length:	70					
Offset:	5 (7%), Referenced to phase 2:EBTL and 6:WBT. Start of Green					
Natural Cycle:	40					
Control Type:	Actuated-Coordinated					
Maximum v/c Ratio:	0.64					
Intersection Signal Delay:	8.6					
Intersection LOS:	A					
ICU Level of Service:	A					
Intersection Capacity Utilization:	44.3%					
Analysis Period (min):	15					



Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
 2: Maple Road & Millersport Hwy NB

4/24/2014

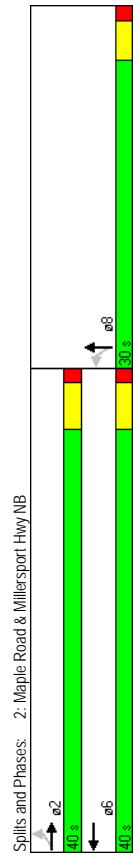
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	97	961	0	0	1057	32	91	0	467	0	0
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	100	0	0	0	0	0	0	0	0	0	0
Storage Length (ft)	1	0	0	0	0	1	0	0	0	0	0
Storage Lanes	50	25	25	25	25	25	25	25	25	25	25
Taper Length (ft)	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor				0.96%			0.850				
Flt Protected	0.950					0.950					
Satd. Flow (prot)	1770	3539	0	0	3525	0	1770	1583	0	0	0
Flt Permitted	0.132					0.950					
Satd. Flow (perm)	246	3539	0	0	3525	0	1770	1583	0	0	0
Right Turn on Red			Yes		Yes		Yes		Yes		Yes
Satd. Flow (RTOR)		45			6		64				30
Link Speed (mph)		654			1770		319		263		263
Link Distance (ft)		9.9			26.8		7.3		6.0		6.0
Travel Time (s)		0.91			0.87		0.84		0.84		0.92
Peak Hour Factor		107			1056		37		108		55.6
Adj. Flow (vph)		107			1056		37		108		55.6
Shared Lane Traffic (%)		107			1056		37		108		55.6
Lane Group Flow (vph)	No	No	No	No	No	No	No	No	No	No	No
Enter Blocked Intersection	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Lane Alignment	12	12	12	12	12	12	12	12	12	12	12
Median Width(ft)	0	0	0	0	0	0	0	0	0	0	0
Link Offset(ft)	16	16	16	16	16	16	16	16	16	16	16
Crosswalk Width(ft)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Two way Left Turn Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Headway Factor	15	9	15	9	15	9	15	9	15	9	15
Turning Speed (mph)	1	2	1	2	1	2	1	2	1	2	1
Number of Detectors	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left
Detector Template	20	100	20	100	20	100	20	100	20	100	20
Leading Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	20	6	20	6	20	6	20	6	20	6	20
Detector 1 Size(ft)	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 1 Type	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Channel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94	6	94	6	94	6	94	6	94	6	94
Detector 2 Size(ft)	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 2 Type	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Channel	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm
Detector 2 Extend (s)	2	2	2	2	2	2	2	2	2	2	2
Turn Type	2	2	2	2	2	2	2	2	2	2	2
Protected Phases	8	8	8	8	8	8	8	8	8	8	8
Permitted Phases	2	2	2	2	2	2	2	2	2	2	2
Detector Phase											

Lanes, Volumes, Timings
 SRF & Associates
 Alternative 5
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
 2: Maple Road & Millersport Hwy NB

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase	1.0	1.0	4.0	4.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Minimum Initial (s)	6.1	6.1	9.1	9.1	6.2	6.2	6.2	6.2	6.2	6.2	6.2
Minimum Split (s)	40.0	40.0	0.0	0.0	40.0	0.0	30.0	30.0	0.0	0.0	0.0
Total Split (s)	57.1%	57.1%	0.0%	0.0%	57.1%	0.0%	42.9%	42.9%	0.0%	0.0%	0.0%
Total Split (%)	34.9	34.9	34.9	34.9	25.4	25.4	25.4	25.4	25.4	25.4	25.4
Maximum Green (s)	3.9	3.9	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
Yellow Time (s)	1.2	1.2	1.2	1.2	1.4	1.4	1.4	1.4	1.4	1.4	1.4
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	5.1	5.1	4.0	4.0	5.1	4.0	4.6	4.6	4.0	4.0	4.0
Total Lost Time (s)											
Lead-Lag											
Lead-Lag Optimize?											
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
Recall Mode	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min
Act Effct Green (s)	35.8	35.8	35.8	35.8	24.5	24.5	24.5	24.5	24.5	24.5	24.5
Actuated g/C Ratio	0.51	0.51	0.51	0.51	0.35	0.35	0.35	0.35	0.35	0.35	0.35
v/c Ratio	0.85	0.58	0.69	0.69	0.17	0.93	0.17	0.93	0.17	0.93	0.17
Control Delay	66.8	11.5	15.7	15.7	16.2	45.3	16.2	45.3	16.2	45.3	16.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.8	11.5	15.7	15.7	16.2	45.3	16.2	45.3	16.2	45.3	16.2
LOS	E	B	B	B	B	B	B	B	B	B	D
Approach Delay	16.6	15.7	15.7	15.7	16.6	15.7	16.6	15.7	16.6	15.7	16.6
Approach LOS	B	B	B	B	B	B	B	B	B	B	D
Intersection Summary	Other										
Area Type:	Other										
Cycle Length:	70										
Actuated Cycle Length:	70										
Offset:	5 (7%), Referenced to phase 2:EBTL and 6:WBT, Start of Green										
Natural Cycle:	50										
Control Type:	Actuated-Coordinated										
Maximum v/c Ratio:	0.93										
Intersection Signal Delay:	21.4										
Intersection LOS:	C										
Intersection Capacity Utilization:	76.9%										
Analysis Period (min):	15										



Lanes, Volumes, Timings
 SRF & Associates
 Alternative 5
 Page 4

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
 3: Maple Road & Maplemere Road

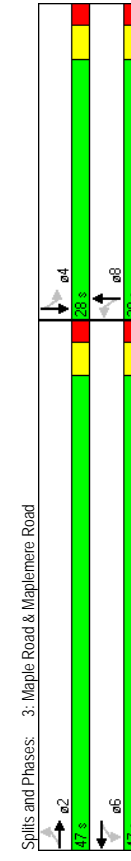
4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	36	1290	35	21	980	62	25	0	12	77	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	70	0	0	0	0	0	0	0	0
Storage Lanes	1	0	1	0	0	0	0	0	0	0	0
Taper Length (ft)	50	25	50	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Fit	0.996	0.950	0.991	0.957	0.964	0.968	0.967	0.967	0.964	0.964	0.964
Satd. Flow (prot)	1770	3525	0	1770	3507	0	1724	0	1724	0	1738
Flt Permitted	0.200	0.144	0.144	0.144	0.144	0.144	0.144	0.144	0.144	0.144	0.144
Right Turn on Red	373	3525	0	268	3507	0	1387	0	1387	0	1372
Satd. Flow (RTOR)	6	Yes	14	Yes	19	Yes	25	Yes	25	Yes	25
Link Speed (mph)	45	45	45	45	45	45	45	45	45	45	45
Link Distance (ft)	1770	1106	1106	1106	1106	1106	1106	1106	1106	1106	1106
Travel Time (s)	26.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8
Peak Hour Factor	0.94	0.94	0.94	0.87	0.87	0.87	0.62	0.62	0.62	0.62	0.81
Adj. Flow (vph)	38	1372	37	24	1126	71	40	0	19	95	10
Shared Lane Traffic (%)	38	1409	0	24	1197	0	0	59	0	0	143
Lane Group Flow (vph)	No	No	No	No	No	No	No	No	No	No	No
Enter Blocked Intersection	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Median Width (ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset (ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width (ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	15	9	15	15	9	15	15	9
Number of Detectors	1	2	1	2	1	2	1	2	1	2	1
Detector Template	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left
Leading Detector (ft)	20	100	20	100	20	100	20	100	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size (ft)	20	6	20	6	20	6	20	6	20	6	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position (ft)	94	94	94	94	94	94	94	94	94	94	94
Detector 2 Size (ft)	6	6	6	6	6	6	6	6	6	6	6
Detector 2 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 2 Channel											
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm	Perm
Protected Phases	2	2	6	6	6	6	8	8	8	8	4
Permitted Phases	2	2	6	6	6	6	8	8	8	8	4
Detector Phase	2	2	6	6	6	6	8	8	8	8	4

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
 3: Maple Road & Maplemere Road

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	9.0	9.0	9.0	9.0	9.0	27.0	27.0	27.0	27.0	27.0
Total Split (s)	47.0	47.0	0.0	47.0	47.0	0.0	28.0	28.0	0.0	28.0	28.0
Total Split (%)	62.7%	62.7%	0.0%	62.7%	62.7%	0.0%	37.3%	37.3%	0.0%	37.3%	37.3%
Maximum Green (s)	42.0	42.0	42.0	42.0	42.0	42.0	23.0	23.0	23.0	23.0	23.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
LeadLag											
Lead-Lag Optimize?											
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	None	None	None	None	None
Recall Mode	Min	Min	Min	Min	Min	Min	None	None	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Pedestrian Calls (#/hr)							0	0	0	0	0
Act Effct Green (s)	34.5	34.5	34.5	34.5	34.5	34.5	9.7	9.7	9.7	9.7	10.3
Actuated g/C Ratio	0.68	0.68	0.68	0.68	0.68	0.68	0.19	0.19	0.19	0.20	0.20
v/c Ratio	0.15	0.59	0.13	0.50	0.21	0.21	0.48	0.48	0.48	0.48	0.48
Control Delay	7.0	7.8	7.4	6.8	6.8	6.8	16.2	16.2	16.2	16.2	22.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.0	7.8	7.4	6.8	6.8	6.8	16.2	16.2	16.2	22.7	22.7
LOS	A	A	A	A	A	A	B	B	B	B	C
Approach Delay	7.8	7.8	7.8	6.8	6.8	6.8	16.2	16.2	16.2	22.7	22.7
Approach LOS	A	A	A	A	A	A	B	B	B	B	C
Intersection Summary	Other										
Area Type:	Other										
Cycle Length:	75										
Actuated Cycle Length:	50.6										
Natural Cycle:	60										
Control Type:	Actuated-Uncoordinated										
Maximum v/c Ratio:	0.59										
Intersection Signal Delay:	8.3										
Intersection Capacity Utilization:	52.7%										
Analysis Period (min):	15										



Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
4: Maple Road & Donna Lea Blvd

4/24/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔↔	↔↔	↔↔	↔↔	↔↔
Volume (vph)	1350	29	23	1051	12	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	50	0	0	0	0
Storage Lanes	0	1	0	1	0	0
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Flt Protected	0.997		0.950	0.982		0.914
Satd. Flow (prot)	3529	0	1770	3539	1672	0
Flt Permitted	0.950		0.950	0.982		0.982
Satd. Flow (perm)	3529	0	1770	3539	1672	0
Link Speed (mph)	45		45	30		30
Link Distance (ft)	1106		1000	355		355
Travel Time (s)	16.8		15.2	8.1		8.1
Peak Hour Factor	0.73	0.73	0.77	0.82	0.82	0.82
Adj. Flow (vph)	1849	40	30	1365	15	26
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1889	0	30	1365	41	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12		12	12		12
Link Offset(ft)	0		0	0		0
Crosswalk Width(ft)	16		16	16		16
Two way Left Turn Lane	Yes		Yes			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15	15	15	15	9
Sign Control	Free	Free	Free	Free	Stop	Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	48.2%					
Analysis Period (min)	15					
ICU Level of Service:	A					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
4: Maple Road & Donna Lea Blvd

4/24/2014

	EBT	EBR	WBL	WBT	NBL	NBR
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔↔	↔↔	↔↔	↔↔	↔↔
Volume (veh/h)	1350	29	23	1051	12	21
Sign Control	Free	Free	Free	Stop	Stop	Stop
Grade	0%		0%	0%		0%
Peak Hour Factor	0.73	0.73	0.77	0.77	0.82	0.82
Hourly flow rate (vph)	1849	40	30	1365	15	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLT		TWLT			
Median storage (veh)	2		2			
Upstream signal (ft)	1106					
pX, platoon unblocked		0.74		0.74		0.74
vC, conflicting volume		1889		2611		945
vC1, stage 1 conf vol				1869		
vC2, stage 2 conf vol				742		
vCu, unblocked vol		1506		2477		235
IC, single (s)		4.1		6.8		6.9
IC, 2 stage (s)				5.8		
IF (s)		2.2		3.5		3.3
p0 queue free %		91		88		96
cM capacity (veh/h)		328		120		570
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	1233	656	30	682	682	40
Volume Left	0	0	30	0	0	15
Volume Right	0	40	0	0	0	26
cSH	1700	1700	328	1700	1700	241
Volume to Capacity	0.73	0.39	0.09	0.40	0.40	0.17
Queue Length 95th (ft)	0	0	7	0	0	15
Control Delay (s)	0.0	0.0	17.1	0.0	0.0	22.9
Lane LOS			C			C
Approach Delay (s)	0.0	0.4				22.9
Approach LOS						C
Intersection Summary						
Average Delay	0.4					
Intersection Capacity Utilization	48.2%					
ICU Level of Service	A					
Analysis Period (min)	15					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
5: Maple Road & Audubon Golf Club

4/24/2014



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕
Volume (vph)	0	1458	14	8	1105	2	10	0	0	6	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	50	0	0	0	0	0	0	0	0
Storage Lanes	1	0	1	0	0	0	0	0	0	0	0
Taper Length (ft)	25	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Flt Protected		0.999		0.950		0.948		0.970			
Flt Permitted	1863	3536	0	1770	3539	0	0	1713	0	0	1863
Satd. Flow (perm)	1863	3536	0	1770	3539	0	0	1713	0	0	1863
Link Speed (mph)	45	46	45	45	45	45	30	30	30	30	30
Link Distance (ft)	446	6.8	446	556	469	469	111	111	111	111	111
Travel Time (s)	6.8	10.7	6.8	8.4	10.7	10.7	2.5	2.5	2.5	2.5	2.5
Adj. Flow (vph)	0	1585	15	9	1188	2	16	0	10	0	0
Shared Lane Traffic (%)											
Lane Group Flow (vph)	0	1600	0	9	1190	0	0	26	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Right
Median Width (ft)	12	12	12	12	12	12	0	0	0	0	0
Link Offset (ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width (ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	15	15	15	15	15	15	15	15	15	15
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	50.7%
Analysis Period (min)	15

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
5: Maple Road & Audubon Golf Club

4/24/2014



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕
Volume (veh/h)	0	1458	14	8	1105	2	10	0	6	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.93	0.93	0.93	0.61	0.61	0.61	0.92	0.92
Hourly flow rate (vph)	0	1585	15	9	1188	2	16	0	10	0	0
Pedestrians											
Lane Width (ft)											
Walking Speed (ft/s)											
Percent Blockage											
Right turn flare (veh)											
Median type							TWLT				
Median storage (veh)							2				
Upstream signal (ft)											
pX, platoon unblocked											
vC, conflicting volume	1190		1600				2204	2800	800	2009	2806
vC1, stage 1 conf vol							1592	1592		1206	1206
vC2, stage 2 conf vol							611	1208		802	1600
vCu, unblocked vol	1190		1600				2204	2800	800	2009	2806
IC, single (s)	4.1		4.1				7.5	6.5	6.9	7.5	6.5
IC, 2 stage (s)							6.5	5.5		6.5	5.5
IF (s)	2.2		2.2				3.5	4.0	3.3	3.5	4.0
p0 queue free %	100		98				85	100	97	100	100
cM capacity (veh/h)	582		405				106	133	328	162	127

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	0	1057	543	9	792	398	26	0
Volume Left	0	0	0	9	0	0	16	0
Volume Right	0	0	15	0	0	2	10	0
cSH	1700	1700	1700	405	1700	1700	142	1700
Volume to Capacity	0.00	0.62	0.32	0.02	0.47	0.23	0.18	0.00
Queue Length 95th (ft)	0	0	0	2	0	0	16	0
Control Delay (s)	0.0	0.0	0.0	14.1	0.0	0.0	36.0	0.0
Lane LOS				B			E	A
Approach Delay (s)	0.0		0.1		36.0		0.0	
Approach LOS					E			A

Intersection Summary	Value
Average Delay	0.4
Intersection Capacity Utilization	50.7%
Analysis Period (min)	15
ICU Level of Service	A

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
6: Maple Road & North Forest Road

4/24/2014

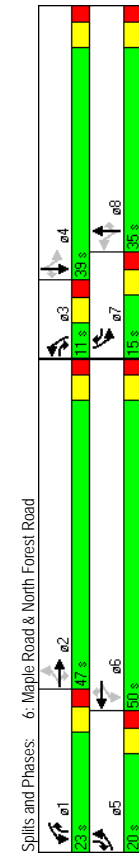
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	222	1109	143	242	828	96	92	361	210	169	391
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	415	220	315	220	315	220	250	250	250	250	250
Storage Lanes	1	1	1	1	1	1	1	1	1	1	1
Taper Length (ft)	90	115	60	25	95	25	95	25	90	90	25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Fit	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850
Flt Protected	0.950		0.950		0.950		0.950		0.950		0.950
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1863	1583	1770	1863
Flt Permitted	0.176		0.091		0.154		0.158		0.158		0.158
Satd. Flow (perm)	328	3539	1583	170	3539	1583	287	1863	1583	294	1863
Right Turn on Red	Yes		Yes		No		Yes		Yes		Yes
Satd. Flow (RTOR)	127		127				22		22		58
Link Speed (mph)	45		45		45		35		35		35
Link Distance (ft)	1705		820		529		608		608		608
Travel Time (s)	25.8		12.4		10.3		11.8		11.8		11.8
Peak Hour Factor	0.92	0.92	0.92	0.90	0.90	0.90	0.96	0.96	0.96	0.87	0.87
Adj. Flow (vph)	241	1205	155	269	920	107	96	376	219	194	449
Shared Lane Traffic (%)	241	1205	155	269	920	107	96	376	219	194	449
Lane Group Flow (vph)	No	No	No	No	No	No	No	No	No	No	No
Enter Blocked Intersection	Left	Left	Right	Left	Right	Left	Left	Left	Right	Left	Right
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Left	Right	Left	Right
Median Width (ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset (ft)	0		0		0		0		0		0
Crosswalk Width (ft)	16		16		16		16		16		16
Two way Left Turn Lane	Yes		Yes		Yes		Yes		Yes		Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	2	1	2	1	2	1	2	1
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru
Leading Detector (ft)	20	100	20	100	20	100	20	100	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size (ft)	20	6	20	20	6	20	20	6	20	20	6
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position (ft)	94		94		94		94		94		94
Detector 2 Size (ft)	6		6		6		6		6		6
Detector 2 Type	CI+EX		CI+EX		CI+EX		CI+EX		CI+EX		CI+EX
Detector 2 Channel											
Detector 2 Extend (s)	0.0		0.0		0.0		0.0		0.0		0.0
Turn Type	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt	pm+ov	pm+pt
Protected Phases	5	2	3	1	6	7	3	8	1	7	4
Permitted Phases	2	2	2	6	6	6	8	8	4	4	4
Detector Phase	5	2	3	1	6	7	3	8	1	7	4

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
6: Maple Road & North Forest Road

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Minimum Initial (s)	1.0	4.0	1.0	1.0	4.0	1.0	1.0	4.0	1.0	1.0	4.0
Minimum Split (s)	7.0	35.0	7.0	7.0	35.0	7.0	7.0	35.0	7.0	7.0	35.0
Total Split (s)	20.0	47.0	11.0	23.0	50.0	15.0	11.0	35.0	23.0	15.0	39.0
Total Split (%)	16.7%	39.2%	9.2%	19.2%	41.7%	12.5%	9.2%	29.2%	19.2%	12.5%	32.5%
Maximum Green (s)	14.0	41.0	5.0	17.0	44.0	9.0	5.0	29.0	17.0	9.0	33.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Walk Time (s)	7.0		7.0		7.0		7.0		7.0		7.0
Flash Dont Walk (s)	22.0		22.0		22.0		22.0		22.0		22.0
Pedestrian Calls (#/hr)	0		0		0		0		0		0
Act Effct Green (s)	54.0	41.1	52.1	60.1	44.1	59.2	31.8	26.8	48.7	39.8	30.8
Actuated g/C Ratio	0.46	0.35	0.45	0.51	0.38	0.51	0.27	0.23	0.42	0.34	0.26
v/c Ratio	0.77	0.97	0.20	0.88	0.69	0.13	0.68	0.88	0.33	0.91	0.92
Control Delay	36.4	57.1	6.1	59.1	34.5	16.8	52.9	66.3	21.8	72.2	66.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.4	57.1	6.1	59.1	34.5	16.8	52.9	66.3	21.8	72.2	66.7
LOS	D	E	A	E	C	B	D	D	E	C	E
Approach Delay	49.1		49.1		38.1		50.3		57.1		57.1
Approach LOS	D		D		D		D		D		E
Intersection Summary	Other										
Area Type:	Other										
Cycle Length:	120										
Actuated Cycle Length:	116.9										
Natural Cycle:	95										
Control Type:	Actuated-Uncoordinated										
Maximum v/c Ratio:	0.97										
Intersection Signal Delay:	47.5										
Intersection Capacity Utilization:	92.4%										
Analysis Period (min):	15										



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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
7: Sheridan Drive & Mill Street

4/24/2014

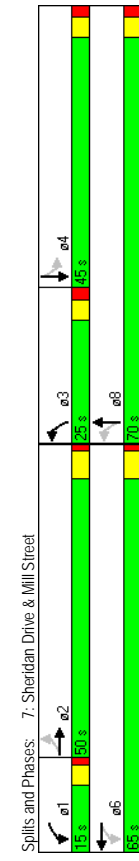
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	18	1437	27	121	1430	53	152	53	148	34	68
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vpph)	100	0	150	0	150	0	40	0	75	0	75
Storage Length (ft)	1	0	1	0	1	0	1	0	1	0	1
Storage Lanes	65	25	60	25	60	25	25	25	60	25	25
Taper Length (ft)	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.997	0.950	0.995	0.950	0.995	0.950	0.890	0.950	0.971	0.950	0.971
Flt Protected	1770	3529	0	1770	3522	0	1770	1658	0	1770	1809
Satd. Flow (prot)	0.089	0.081	0.081	0.081	0.081	0.081	0.081	0.081	0.081	0.081	0.081
Flt Permitted	166	3529	0	151	3522	0	1105	1658	0	1133	1809
Satd. Flow (perm)	No	No	No	Yes	Yes	Yes	No	No	No	Yes	Yes
Right Turn on Red	4	4	4	4	4	4	4	4	4	4	4
Satd. Flow (RTOR)	45	45	45	45	45	45	30	30	30	30	30
Link Speed (mph)	2782	2782	977	977	977	977	838	838	362	838	362
Link Distance (ft)	42.2	42.2	14.8	14.8	14.8	19.0	19.0	19.0	8.2	19.0	8.2
Travel Time (s)	0.84	0.84	0.92	0.92	0.92	0.83	0.83	0.83	0.83	0.77	0.77
Peak Hour Factor	21	1711	32	132	1554	58	183	64	178	44	88
Adj. Flow (vph)	21	1743	0	132	1612	0	183	242	0	44	109
Lane Group Flow (vph)	No	No	No	No	No	No	No	No	No	No	No
Enter Blocked Intersection	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Median Width (ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset (ft)	0	0	0	0	0	0	0	0	0	0	0
Link Offset (ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9	15	9	15	9	15
Number of Detectors	1	2	1	2	1	2	1	2	1	2	1
Detector Template	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left
Leading Detector (ft)	20	100	20	100	20	100	20	100	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size (ft)	20	6	20	6	20	6	20	6	20	6	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position (ft)	94	94	94	94	94	94	94	94	94	94	94
Detector 2 Size (ft)	6	6	6	6	6	6	6	6	6	6	6
Detector 2 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 2 Channel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Extend (s)	Perm	pm+pt	pm+pt	pm+pt	pm+pt	pm+pt	pm+pt	pm+pt	Perm	Perm	Perm
Turn Type	2	2	6	6	6	6	8	8	4	4	4
Protected Phases	2	2	6	6	6	6	8	8	4	4	4
Permitted Phases	2	2	1	6	6	3	8	8	4	4	4
Detector Phase	2	2	1	6	6	3	8	8	4	4	4

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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
7: Sheridan Drive & Mill Street

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase	4.0	4.0	1.0	4.0	4.0	1.0	4.0	4.0	4.0	4.0	4.0
Minimum Initial (s)	28.3	28.3	6.2	28.3	6.2	28.3	6.2	34.2	34.2	34.2	34.2
Minimum Split (s)	50.0	50.0	0.0	15.0	65.0	0.0	25.0	70.0	0.0	45.0	45.0
Total Split (s)	37.0%	37.0%	0.0%	11.1%	48.1%	0.0%	18.5%	51.9%	0.0%	33.3%	33.3%
Total Split (%)	44.5	44.5	10.7	59.5	19.8	64.8	39.8	39.8	39.8	39.8	39.8
Maximum Green (s)	4.3	4.3	3.2	4.3	3.2	4.3	3.2	3.2	3.2	3.2	3.2
Yellow Time (s)	1.2	1.2	1.1	1.2	1.1	1.2	2.0	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	5.5	5.5	4.0	4.3	5.5	4.0	5.2	5.2	4.0	5.2	5.2
Total Lost Time (s)	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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
Recall Mode	None	None	None	None	None	None	Max	Max	Max	Max	Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0	15.0	15.0	15.0	15.0	22.0	22.0	22.0	22.0	22.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0	0	0	0
Act Effct Green (s)	45.1	45.1	60.7	59.5	64.8	64.8	64.8	64.8	64.8	39.8	39.8
Actuated G/C Ratio	0.33	0.33	0.45	0.44	0.48	0.48	0.29	0.29	0.29	0.29	0.29
v/c Ratio	0.38	1.48	0.70	1.04	0.29	0.30	0.13	0.20	0.13	0.20	0.20
Control Delay	57.9	253.5	45.9	69.9	21.8	22.7	36.4	33.9	36.4	33.9	33.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.9	253.5	45.9	69.9	21.8	22.7	36.4	33.9	36.4	33.9	33.9
LOS	E	F	D	E	E	C	C	C	D	D	C
Approach Delay	251.1	68.1	E	22.3	E	C	C	C	E	C	C
Approach LOS	F	E	E	C	E	C	C	C	E	C	C



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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
8: Sheridan Drive & North Forest Road

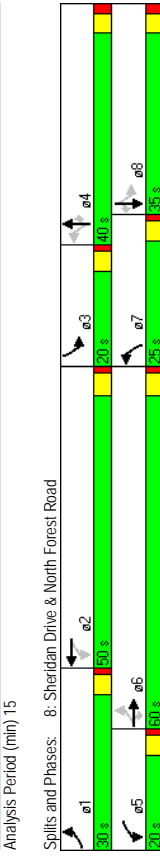
4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	138	1354	303	305	1226	49	307	470	82	91	512
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	405	170	260	0	180	0	180	265	180	200	200
Storage Lanes	1	1	1	0	1	0	1	1	1	1	1
Taper Length (ft)	200	25	200	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95
Flt Protected	0.950			0.950			0.950			0.950	
Satd. Flow (prot)	1770	3539	1583	1770	3518	0	1770	1863	1583	1770	3539
Flt Permitted	0.073			0.069			0.161			0.151	
Satd. Flow (perm)	136	3539	1583	129	3518	0	300	1863	1583	281	3539
Right Turn on Red		Yes		Yes			Yes		Yes		Yes
Satd. Flow (RTOR)		140		3			69				213
Link Speed (mph)		45		45			40				35
Link Distance (ft)		971		2219			547				354
Travel Time (s)		14.7		33.6			9.3				6.9
Peak Hour Factor	0.94	0.94	0.94	0.93	0.93	0.93	0.89	0.89	0.89	0.95	0.95
Adj. Flow (vph)	147	1440	322	328	1318	53	345	528	92	96	539
Shared Lane Traffic (%)											
Lane Group Flow (vph)	No	No	No	No	No	No	No	No	No	No	No
Enter Blocked Intersection	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Median Width (ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset (ft)	0			0			0			0	
Crosswalk Width (ft)	16			16			16			16	
Two way Left Turn Lane	Yes			Yes			Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	15	9	15	15	9	15	15	9
Number of Detectors	1	2	1	2	1	2	1	2	1	1	2
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru
Leading Detector (ft)	20	100	20	100	20	100	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position (ft)	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size (ft)	20	6	20	20	6	20	6	20	20	6	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position (ft)	94			94			94			94	
Detector 2 Size (ft)	6			6			6			6	
Detector 2 Type	CI+EX			CI+EX			CI+EX			CI+EX	
Detector 2 Channel											
Detector 2 Extend (s)	0.0			0.0			0.0			0.0	
Turn Type	pm+pt	Perm	pm+pt	pm+pt	Perm	pm+pt	Perm	pm+pt	Perm	pm+pt	Perm
Protected Phases	1	6	5	2	7	4	7	4	3	8	
Permitted Phases	6	6	6	2	4	4	4	4	8	8	
Detector Phase	1	6	6	5	2	7	4	4	3	8	

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
8: Sheridan Drive & North Forest Road

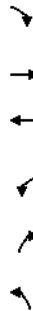
4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.3	27.9	27.9	8.3	27.9	8.3	27.9	27.9	27.9	8.3	27.9
Total Split (s)	30.0	60.0	60.0	20.0	50.0	0.0	25.0	40.0	40.0	20.0	35.0
Total Split (%)	21.4%	42.9%	42.9%	14.3%	35.7%	0.0%	17.9%	28.6%	28.6%	14.3%	25.0%
Maximum Green (s)	25.7	54.9	54.9	15.7	44.9		20.7	34.9	34.9	15.7	29.9
Yellow Time (s)	3.2	3.9	3.9	3.2	3.9		3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.1	1.2	1.1	1.2	1.1		1.1	1.1	1.1	1.1	1.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.3	5.1	5.1	4.3	5.1		4.3	5.1	5.1	4.3	5.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	None	Max	None		None	None	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0	15.0	15.0	15.0		15.0	15.0	15.0	15.0	15.0
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0	0	0	0
Act Effct Green (s)	68.1	54.9	54.9	73.6	58.3		52.3	36.9	36.9	37.6	26.5
Actuated g/C Ratio	0.50	0.40	0.40	0.54	0.43		0.38	0.27	0.27	0.28	0.19
v/c Ratio	0.68	1.01	0.45	1.27	0.91		1.02	1.05	1.05	0.51	0.79
Control Delay	43.3	67.4	18.7	183.0	47.6		90.5	101.6	14.2	38.1	61.3
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	43.3	67.4	18.7	183.0	47.6		90.5	101.6	14.2	38.1	61.3
LOS	D	E	B	F	D		F	F	B	D	E
Approach Delay		57.4		73.8			89.3		F		45.5
Approach LOS		E		E			F		F		D
Intersection Summary											
Area Type:	Other										
Cycle Length:	140										
Actuated Cycle Length:	136.6										
Natural Cycle:	125										
Control Type:	Actuated-Uncoordinated										
Maximum v/c Ratio:	1.27										
Intersection Signal Delay:	66.3										
Intersection Capacity Utilization:	101.2%										
Analysis Period (min):	15										



Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
9: Proposed Access Driveway & North Forest Road

4/24/2014



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			4		
Volume (vph)	29	94	40	623	714	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fit	0.897			0.995		
Fit Protected	0.988			0.997		
Satd. Flow (prot)	1651	0	0	1857	1853	0
Fit Permitted	0.988			0.997		
Satd. Flow (perm)	1651	0	0	1857	1853	0
Link Speed (mph)	30			35	35	
Link Distance (ft)	245			310	198	
Travel Time (s)	5.6			6.0	3.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	32	102	43	677	776	28
Shared Lane Traffic (%)						
Lane Group Flow (vph)	134	0	0	720	804	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	Free	Free	9
Sign Control	Stop			Free	Free	Free
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	134	721	804			
Volume Left	32	43	0			
Volume Right	204	820	1700			
cSH	0.66	0.05	0.47			
Volume to Capacity	99	4	0			
Queue Length 95th (ft)	51.2	1.4	0.0			
Control Delay (s)	F	A				
Lane LOS	F	A				
Approach Delay (s)	51.2	1.4	0.0			
Approach LOS	F					
Intersection Summary						
Average Delay					4.7	
Intersection Capacity Utilization					79.6%	ICU Level of Service D
Analysis Period (min)					15	

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
9: Proposed Access Driveway & North Forest Road

4/24/2014



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			4		
Volume (veh/h)	29	94	40	623	714	26
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	32	102	43	677	776	28
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)				664		
pX, platoon unblocked	0.70					
vC, conflicting volume	1554	790	804			
vC1, stage 1 cont vol						
vC2, stage 2 cont vol						
vCu, unblocked vol	1578	790	804			
IC, single (s)	6.4	6.2	4.1			
IC, 2 stage (s)						
IF (s)	3.5	3.3	2.2			
p0 queue free %	61	74	95			
cM capacity (veh/h)	80	390	820			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	134	721	804			
Volume Left	32	43	0			
Volume Right	204	820	1700			
cSH	0.66	0.05	0.47			
Volume to Capacity	99	4	0			
Queue Length 95th (ft)	51.2	1.4	0.0			
Control Delay (s)	F	A				
Lane LOS	F	A				
Approach Delay (s)	51.2	1.4	0.0			
Approach LOS	F					
Intersection Summary						
Average Delay					4.7	
Intersection Capacity Utilization					79.6%	ICU Level of Service D
Analysis Period (min)					15	

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
10: Sheridan Drive & Proposed Access Driveway

4/24/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	186	1703	13	5	1638	96	13	0	17	83	0
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vpph)	350	0	75	0	0	0	0	0	0	0	0
Storage Length (ft)	1	0	1	0	0	0	0	0	0	0	1
Storage Lanes	25	25	25	25	25	25	25	25	25	25	25
Taper Length (ft)	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.999	0.992	0.992	0.992	0.992	0.992	0.922	0.922	0.922	0.850	0.850
Flt Protected	0.950	0.950	0.950	0.950	0.950	0.950	0.979	0.979	0.950	0.950	0.950
Satd. Flow (prot)	1770	3536	0	1770	3511	0	1681	0	1681	0	1770
Flt Permitted	0.950	0.950	0.950	0.950	0.950	0.950	0.979	0.979	0.950	0.950	0.950
Satd. Flow (perm)	1770	3536	0	1770	3511	0	1681	0	1681	0	1770
Link Speed (mph)	45	45	45	45	45	45	30	30	30	30	30
Link Distance (ft)	635	697	697	697	697	697	278	278	204	204	204
Travel Time (s)	9.6	10.6	10.6	10.6	10.6	10.6	6.3	6.3	4.6	4.6	4.6
Adj. Flow (vph)	214	1957	15	5	1743	102	17	0	23	90	0
Shared Lane Traffic (%)	0.87	0.87	0.87	0.94	0.94	0.94	0.75	0.75	0.75	0.92	0.92
Lane Group Flow (vph)	No	No	No	No	No	No	No	No	No	No	No
Enter Blocked Intersection	Left	Right	Left	Left	Right	Left	Left	Left	Right	Left	Right
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Right
Median Width (ft)	12	12	12	12	12	12	0	0	0	0	0
Link Offset (ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width (ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	15	9	15	15	15	9	15	15
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop
Intersection Summary											
Area Type:	Other										
Control Type:	Unsignalized										
Intersection Capacity Utilization	77.8%										
Analysis Period (min)	15										
ICU Level of Service:	D										

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
10: Sheridan Drive & Proposed Access Driveway

4/24/2014

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	186	1703	13	5	1638	96	13	0	17	83	0
Volume (veh/h)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop
Grade	0.87	0.87	0.87	0.94	0.94	0.94	0.75	0.75	0.75	0.92	0.92
Peak Hour Factor	214	1957	15	5	1743	102	17	0	23	90	0
Hourly flow rate (vph)	214	1957	15	5	1743	102	17	0	23	90	0
Pedestrians											
Lane Width (ft)											
Walking Speed (ft/s)											
Percent Blockage											
Right turn flare (veh)											
Median type	TWLT	TL	TWLT	TL	TWLT	TL	TWLT	TL	TWLT	TL	TWLT
Median storage (veh)	2	2	2	2	2	2	2	2	2	2	2
Upstream signal (ft)	635	635	635	635	635	635	635	635	635	635	635
pX, platoon unblocked	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59
vC, conflicting volume	1845	1972	1972	1972	1972	1972	3511	4248	986	3233	4204
vC1, stage 1 conf vol	2393	2393	2393	2393	2393	2393	1804	1804	1804	1804	1804
vC2, stage 2 conf vol	1845	1845	1845	1845	1845	1845	1119	1855	1855	1429	2400
vCu, unblocked vol	4.1	4.1	4.1	4.1	4.1	4.1	3868	5118	0	3396	5044
IC, single (s)	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
IC, 2 stage (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
IF (s)	2.2	2.2	2.2	2.2	2.2	2.2	3.5	4.0	3.3	3.5	4.0
p0 queue free %	34	98	98	98	98	98	100	96	0	100	13
cM capacity (veh/h)	325	324	324	324	324	324	0	0	639	63	272
Direction, Lane #											
Volume Total	214	1305	667	5	1162	683	40	90	237	0	237
Volume Left	214	0	0	5	0	0	17	90	0	0	0
Volume Right	0	15	15	0	0	102	23	0	237	0	237
cSH	325	1700	1700	324	1700	1700	0	63	272	0	272
Volume to Capacity	0.66	0.77	0.39	0.02	0.68	0.40	407.05	1.44	0.87	0.68	0.87
Queue Length 95th (ft)	109	0	0	1	0	0	Err	195	187	0	187
Control Delay (s)	34.9	0.0	0.0	16.3	0.0	0.0	Err	378.5	66.9	0.0	66.9
Lane LOS	D	C	C	C	C	C	F	F	F	F	F
Approach Delay (s)	3.4	0.0	0.0	0.0	0.0	0.0	Err	152.8	0.0	0.0	0.0
Approach LOS	F	F	F	F	F	F	F	F	F	F	F
Intersection Summary											
Average Delay	103.9										
Intersection Capacity Utilization	77.8%										
ICU Level of Service	D										
Analysis Period (min)	15										

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
11: Sheridan Drive & Frankhauser Road

4/24/2014

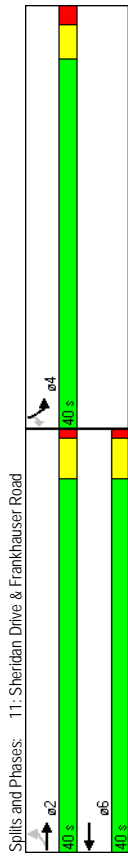
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Volume (vph)	80	1799	1827	41	102	128
Ideal Flow (vppf)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105	0	0	0	50	50
Storage Lanes	1	0	0	1	1	1
Taper Length (ft)	65	25	25	25	25	25
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Flt Protected	0.950	0.997			0.850	
Satd. Flow (prot)	1770	3539	3529	0	1770	1583
Flt Permitted	0.070				0.950	
Satd. Flow (perm)	130	3539	3529	0	1770	1583
Right Turn on Red		Yes			Yes	Yes
Satd. Flow (RTOR)		3			2	
Link Speed (mph)	45	45			30	
Link Distance (ft)	101.4	635			828	
Travel Time (s)	15.4	9.6			18.8	
Peak Hour Factor	0.90	0.90	0.91	0.91	0.82	0.82
Adj. Flow (vph)	89	1999	2008	45	124	156
Shared Lane Traffic (%)						
Lane Group Flow (vph)	89	1999	2053	0	124	156
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Right
Median Width (ft)	12	12	12	12	12	12
Link Offset (ft)	0	0	0	0	0	0
Crosswalk Width (ft)	16	16			16	
Two way Left Turn Lane	Yes	Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	2	2	9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Left	Right	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position (ft)	0	0	0	0	0	0
Detector 1 Size (ft)	20	6	6	20	20	20
Detector 1 Type	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX	CI+EX
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position (ft)	94	94				
Detector 2 Size (ft)	6	6			6	
Detector 2 Type	CI+EX	CI+EX			CI+EX	
Detector 2 Channel						
Detector 2 Extend (s)	0.0	0.0			0.0	
Turn Type	Perm				Perm	
Protected Phases	2	2	6	4	4	4
Permitted Phases	2	2	6	4	4	4

Lanes, Volumes, Timings
SRF & Associates
Alternative 5
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
11: Sheridan Drive & Frankhauser Road

4/24/2014

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	1.0	1.0
Minimum Split (s)	40.0	40.0	40.0	40.0	31.1	31.1
Total Split (s)	40.0	40.0	40.0	40.0	40.0	40.0
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Maximum Green (s)	35.2	35.2	35.2	34.9	34.9	34.9
Yellow Time (s)	3.9	3.9	3.9	3.2	3.2	3.2
All-Red Time (s)	0.9	0.9	0.9	1.9	1.9	1.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.8	4.8	4.8	4.0	5.1	5.1
Lead-Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	15.0	15.0	15.0	19.0	19.0	19.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effct Green (s)	56.9	56.9	56.9	13.2	13.2	13.2
Actuated g/C Ratio	0.71	0.71	0.71	0.16	0.16	0.16
v/c Ratio	0.97	0.79	0.82	0.42	0.59	0.59
Control Delay	108.8	12.0	12.9	33.2	39.0	39.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	108.8	12.0	12.9	33.2	39.0	39.0
LOS	F	B	B	C	C	D
Approach Delay	16.1	12.9			36.4	
Approach LOS	B	B			D	
Intersection Summary						
Area Type:	Other					
Cycle Length:	80					
Actuated Cycle Length:	80					
Offset:	55 (69%), Referenced to phase 2:EBTL and 6:WBT, Start of Green					
Natural Cycle:	150					
Control Type:	Actuated-Coordinated					
Maximum v/c Ratio:	0.97					
Intersection Signal Delay:	15.9					
Intersection Capacity Utilization:	74.1%					
Analysis Period (min):	15					



Lanes, Volumes, Timings
SRF & Associates
Alternative 5
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
 12: Sheridan Drive & I-290 NB

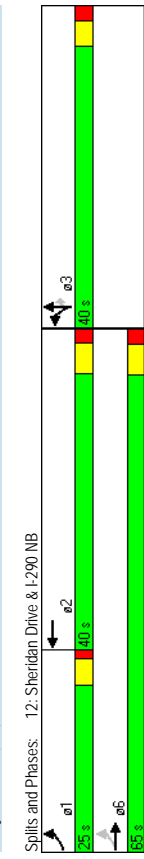
4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	355	1454	0	1306	699	317	0	447	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	0	0	230	0	0	0	0	0	0
Storage Lanes	1	0	0	0	1	0	0	1	0	0	0
Taper Length (ft)	105	25	25	25	25	25	25	25	25	25	25
Lane Util. Factor	1.00	0.91	1.00	0.91	0.91	0.95	0.91	0.95	1.00	1.00	1.00
Flt	0.950			0.948			0.880	0.850			
Satd. Flow (prot)	1770	5085	0	4821	0	1681	1477	1504	0	0	0
Flt Permitted	0.083					0.950	0.990				
Satd. Flow (perm)	155	5085	0	4821	0	1681	1477	1504	0	0	0
Right Turn on Red		Yes		Yes			Yes	Yes			Yes
Satd. Flow (RTOR)		136					32	32			
Link Speed (mph)		45		45			30	30			30
Link Distance (ft)		610		193			830	423			423
Travel Time (s)		9.2		2.9			18.9	9.6			9.6
Peak Hour Factor	0.99	0.99	0.99	0.92	0.92	0.80	0.80	0.80	0.80	0.92	0.92
Adj. Flow (vph)	359	1469	0	1420	760	396	0	559	0	0	0
Shared Lane Traffic (%)						16%		45%			
Lane Group Flow (vph)	359	1469	0	2180	0	333	315	307	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Median Width (ft)	12	12	12	12	12	12	12	12	12	12	12
Link Offset (ft)	0	0	0	0	0	0	0	0	0	0	0
Crosswalk Width (ft)	16	16	16	16	16	16	16	16	16	16	16
Two way Left Turn Lane											
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	9	15	9	15	9	15	9	15
Number of Detectors	1	2		2		1	2	1			
Detector Template	Left	Thru		Thru		Left	Thru	Right			
Leading Detector (ft)	20	100		100		20	100	20			
Trailing Detector (ft)	0	0		0		0	0	0			
Detector 1 Position (ft)	0	0		0		0	0	0			
Detector 1 Size (ft)	20	6		6		20	6	20			
Detector 1 Type	CI+EX	CI+EX		CI+EX		CI+EX	CI+EX	CI+EX			
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0		0.0		0.0	0.0	0.0			
Detector 1 Queue (s)	0.0	0.0		0.0		0.0	0.0	0.0			
Detector 1 Delay (s)	0.0	0.0		0.0		0.0	0.0	0.0			
Detector 2 Position (ft)	94			94		94		94			
Detector 2 Size (ft)	6			6		6		6			
Detector 2 Type	CI+EX			CI+EX		CI+EX		CI+EX			
Detector 2 Channel											
Detector 2 Extend (s)	0.0	0.0		0.0		0.0	0.0	0.0			
Turn Type	pm+pt			custom		custom		Perm			
Protected Phases	1	6		2		3	3	3			
Permitted Phases	6			3		3	3	3			
Detector Phase	1	6		2		3	3	3			

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
 12: Sheridan Drive & I-290 NB

4/24/2014

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Switch Phase											
Minimum Initial (s)	1.0	4.0		4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	6.2	33.9		27.8		29.0	29.0	29.0	29.0	29.0	29.0
Total Split (s)	25.0	65.0	0.0	40.0	0.0	40.0	40.0	40.0	40.0	40.0	40.0
Total Split (%)	23.8%	61.9%	0.0%	38.1%	0.0%	38.1%	38.1%	38.1%	38.1%	38.1%	38.1%
Maximum Green (s)	20.7	59.1		34.2		34.8	34.8	34.8	34.8	34.8	34.8
Yellow Time (s)	3.2	3.9		3.9		3.2	3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.1	2.0		1.9		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.3	5.9	4.0	5.8	4.0	5.2	5.2	5.2	5.2	4.0	4.0
Lead/Lag	Lead	Lag		Lag		Lag		Lag		Lag	
Vehicle Extension (s)	2.0	3.0		3.0		3.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	C-Max		C-Max		None	None	None	None	None	None
Walk Time (s)	7.0			7.0		7.0					
Flash Dont Walk (s)	21.0			15.0		15.0					
Pedestrian Calls (#/hr)	0			0		0					
Act Effct Green (s)	68.8	67.2		43.9		26.7	26.7	26.7	26.7	26.7	26.7
Actuated g/C Ratio	0.66	0.64		0.42		0.25	0.25	0.25	0.25	0.25	0.25
v/c Ratio	0.91	0.45		1.04		0.78	0.79	0.76			
Control Delay	55.1	10.9		61.4		48.7	46.4	43.6			
Queue Delay	0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.1	10.9		61.4		48.7	46.4	43.6			
LOS	E	B		E		D	D	D	D	D	D
Approach Delay	19.6			61.4		46.3					
Approach LOS	B			E		D					



Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
13: Sheridan Drive & Harlem Road

4/24/2014

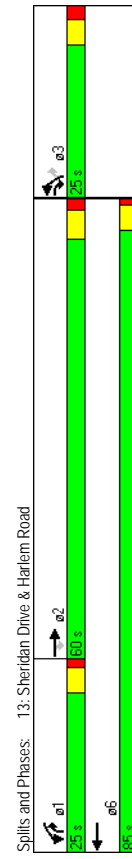
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔	↔↔	↔↔	↔↔	↔↔
Volume (vph)	1039	604	504	1119	267	769
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	215	0	140	0	0
Storage Lanes	1	1	1	2	2	2
Taper Length (ft)	230	100	100	100	25	25
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	0.88
Flt Protected	0.850		0.950		0.850	
Satd. Flow (prot)	3539	1583	3433	3539	3433	2787
Flt Permitted	0.950		0.950		0.950	
Satd. Flow (perm)	3539	1583	3433	3539	3433	2787
Right Turn on Red	No					Yes
Satd. Flow (RTOR)	45		45		35	110
Link Speed (mph)	314		610		338	
Link Distance (ft)	4.8		9.2		6.6	
Travel Time (s)	0.98	0.98	0.95	0.95	0.85	0.85
Peak Hour Factor	1060	616	531	1178	314	905
Adj. Flow (vph)	1060	616	531	1178	314	905
Lane Group Flow (vph)	No	No	No	No	No	No
Enter Blocked Intersection	Left	Right	Left	Left	Right	Right
Lane Alignment	12		24		24	
Median Width(ft)	0		0		0	
Link Offset(ft)	16		16		16	
Crosswalk Width(ft)	1.00	1.00	1.00	1.00	1.00	1.00
Two way Left Turn Lane	9	15	2	1	15	9
Headway Factor	2	1	1	2	1	1
Turning Speed (mph)	Thru	Right	Left	Thru	Left	Right
Number of Detectors	100	20	20	100	20	20
Detector Template	0	0	0	0	0	0
Leading Detector (ft)	0	0	0	0	0	0
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	6	20	20	6	20	20
Detector 1 Size(ft)	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex	Ch+Ex
Detector 1 Type	Detector 1 Channel					
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	94		94			
Detector 2 Size(ft)	6		6			
Detector 2 Type	Ch+Ex		Ch+Ex			
Detector 2 Channel	Detector 2 Extend (s)		0.0			
Turn Type	pm+ov	Prot			pm+ov	
Protected Phases	2	3	1	6	3	1
Permitted Phases	2	3	1	6	3	1
Detector Phase	2	3	1	6	3	1

Lanes, Volumes, Timings
SRF & Associates
Alternative 5
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
13: Sheridan Drive & Harlem Road

4/24/2014

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Switch Phase	↔	↔	↔	↔	↔	↔
Minimum Initial (s)	1.0	1.0	1.0	4.0	1.0	1.0
Minimum Split (s)	30.5	6.2	5.3	32.3	6.2	5.3
Total Split (s)	60.0	25.0	25.0	85.0	25.0	25.0
Total Split (%)	54.5%	22.7%	22.7%	77.3%	22.7%	22.7%
Maximum Green (s)	54.5	19.8	20.7	80.7	19.8	20.7
Yellow Time (s)	3.9	3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.6	2.0	1.1	1.1	2.0	1.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.2	4.3	4.3	5.2	4.3
Lead/Lag	Lag	Lead	Lead	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	C-Max	None	None	None	None	None
Walk Time (s)	7.0		7.0			
Flash Dont Walk (s)	18.0		21.0			
Pedestrian Calls (#/hr)	0		0			
Act Effct Green (s)	59.3	79.5	21.0	85.8	14.7	40.9
Actuated g/C Ratio	0.54	0.72	0.19	0.78	0.13	0.37
v/c Ratio	0.56	0.54	0.81	0.43	0.68	0.82
Control Delay	18.9	9.3	53.3	4.8	53.0	33.7
Queue Delay	0.0	0.0	0.0	0.3	0.0	0.0
Total Delay	18.9	9.3	53.3	5.2	53.0	33.7
LOS	B	A	D	A	D	C
Approach Delay	15.3		20.1		38.6	
Approach LOS	B		C		D	



Intersection Summary
Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 36 (33%), Referenced to phase 2:EBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 23.3
Intersection Capacity Utilization 63.8%
Analysis Period (min) 15
Spills and Phases: 13: Sheridan Drive & Harlem Road
Lanes, Volumes, Timings
SRF & Associates
Alternative 5
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Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
14: I-290 SB & Harlem Road
4/24/2014

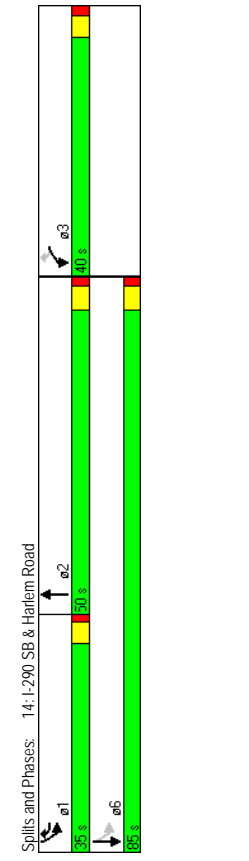
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↕	↕	↔	↔
Volume (vph)	234	413	588	11	540	532
Ideal Flow (vppf)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	0	0	330	0
Storage Lanes	1	1	0	0	1	0
Taper Length (ft)	25	25	25	25	75	25
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	3529	0	1770	3539
Flt Permitted	0.950				0.144	
Satd. Flow (perm)	1770	1583	3529	0	268	3539
Right Turn on Red	Yes	Yes	Yes	Yes	Yes	Yes
Satd. Flow (RTOR)	64	2				
Link Speed (mph)	30	35				35
Link Distance (ft)	333	250				456
Travel Time (s)	7.6	4.9				8.9
Peak Hour Factor	0.69	0.69	0.77	0.77	0.92	0.92
Adj. Flow (vph)	339	599	764	14	587	578
Shared Lane Traffic (%)						
Lane Group Flow (vph)	339	599	778	0	587	578
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width (ft)	12	12				12
Link Offset (ft)	0	0				0
Crosswalk Width (ft)	16	16				16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9			9	15
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (ft)	20	20	100		20	100
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position (ft)	0	0	0		0	0
Detector 1 Size (ft)	20	20	6		20	6
Detector 1 Type	CI+EX	CI+EX	CI+EX		CI+EX	CI+EX
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position (ft)			94			94
Detector 2 Size (ft)			6			6
Detector 2 Type			CI+EX			CI+EX
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type		pm+ov			pm+pl	
Protected Phases	3	1	2		1	6
Permitted Phases	3	1	2		6	6
Detector Phase	3	1	2		1	6

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
14: I-290 SB & Harlem Road
4/24/2014

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Switch Phase	↔	↔	↕	↕	↔	↔
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	9.2	30.6	9.2	21.0	21.0
Total Split (s)	40.0	35.0	50.0	0.0	35.0	85.0
Total Split (%)	32.0%	28.0%	40.0%	0.0%	28.0%	68.0%
Maximum Green (s)	35.2	30.7	45.0	30.7	80.0	80.0
Yellow Time (s)	3.2	3.2	3.6	3.2	3.6	3.6
All-Red Time (s)	1.6	1.1	1.4	1.1	1.4	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.8	4.3	5.0	4.0	4.3	5.0
Lead/Lag	Lead	Lead	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Min	None	None	None
Walk Time (s)			10.0			
Flash Dont Walk (s)			15.0			
Pedestrian Calls (#/hr)			0			
Act Effct Green (s)	24.1	60.3	28.8	65.2	64.5	64.5
Actuated g/C Ratio	0.24	0.61	0.29	0.66	0.65	0.65
v/c Ratio	0.78	0.60	0.75	0.90	0.25	0.25
Control Delay	49.1	14.4	37.1	42.3	8.0	8.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.1	14.4	37.1	42.3	8.0	8.0
LOS	D	B	D	D	A	A
Approach Delay	26.9		37.1		25.3	
Approach LOS	C		D		C	

Intersection Summary

Area Type:	Other
Cycle Length:	125
Actuated Cycle Length:	98.6
Natural Cycle:	90
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.90
Intersection Signal Delay:	29.0
Intersection Capacity Utilization:	71.2%
Analysis Period (min):	15



Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
17: Proposed Access Driveway & Frankhauser Road

4/24/2014

	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Volume (vph)	138	0	75	46	0	92
Ideal Flow (vpph)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fit	0.949					
Fit Protected	0.950					
Satd. Flow (prot)	1770	0	1768	0	0	1863
Fit Permitted	0.950					
Satd. Flow (perm)	1770	0	1768	0	0	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	236		828			109
Travel Time (s)	5.4		18.8			2.5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	150	0	82	50	0	100
Shared Lane Traffic (%)						
Lane Group Flow (vph)	150	0	132	0	0	100
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	Free	9	15	Free
Sign Control	Stop	Free	Free	Free	Free	Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	21.1%					
Analysis Period (min)	15					
ICU Level of Service A						

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
17: Proposed Access Driveway & Frankhauser Road

4/24/2014

	WBL	WBR	NBT	NBR	SBL	SBT
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Volume (veh/h)	138	0	75	46	0	92
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	150	0	82	50	0	100
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)			828			
pX, platoon unblocked						
VC, conflicting volume	207	107				132
VC1, stage 1 cont vol						
VC2, stage 2 cont vol	207	107				132
vCu, unblocked vol	6.4	6.2				4.1
IC, single (s)						
IC, 2 stage (s)						
IF (s)	3.5	3.3				2.2
p0 queue free %	81	100				100
cM capacity (veh/h)	782	948				1454
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	150	132	100			
Volume Left	150	0	0			
Volume Right	0	50	0			
cSH	782	1700	1454			
Volume to Capacity	0.19	0.08	0.00			
Queue Length 95th (ft)	18	0	0			
Control Delay (s)	10.7	0.0	0.0			
Lane LOS	B					
Approach Delay (s)	10.7	0.0	0.0			
Approach LOS	B					
Intersection Summary						
Average Delay	4.2					
Intersection Capacity Utilization	21.1%					
Analysis Period (min)	15					
ICU Level of Service A						

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
56: Maple Road & Proposed North Driveway 4/24/2014

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔	↔↔	↔↔	↔	↔
Volume (veh/h)	1294	78	125	981	94	172
Ideal Flow (veh/pl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	225	0	150	0	150
Storage Lanes	0	1	1	1	1	1
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Fit Protected	0.991		0.950		0.950	0.850
Satd. Flow (prot)	3507	0	1770	3539	1770	1583
Fit Permitted	0.950		0.950		0.950	0.950
Satd. Flow (perm)	3507	0	1770	3539	1770	1583
Link Speed (mph)	45		45	30		30
Link Distance (ft)	1000		928	337		337
Travel Time (s)	15.2		14.1	7.7		7.7
Adj. Flow (vph)	1407	85	136	1066	102	187
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1492	0	136	1066	102	187
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12		12	12		12
Link Offset(ft)	0		0	0		0
Crosswalk Width(ft)	16		16	16		16
Two way Left Turn Lane	Yes		Yes			Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15	15	15	15	9
Sign Control	Free	Free	Free	Free	Stop	Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	60.4%					
Analysis Period (min)	15					
ICU Level of Service:	B					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
56: Maple Road & Proposed North Driveway 4/24/2014

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔	↔	↔↔	↔↔	↔	↔
Volume (veh/h)	1294	78	125	981	94	172
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%		0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1407	85	136	1066	102	187
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						6
Right turn flare (veh)						6
Median type			TW/TL			
Median storage (veh)	2			2		
Upstream signal (ft)						
pX, platoon unblocked			1491		2254	746
vC, conflicting volume			1491		1449	
vC1, stage 1 conf vol			1491		805	
vC2, stage 2 conf vol			1491		2254	746
vCu, unblocked vol			4.1		6.8	6.9
IC, 2 stage (s)			2.2		3.5	3.3
IF (s)			70		31	48
p0 queue free %			446		148	356
cM capacity (veh/h)						
Direction, Lane #						
EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	NB 2
938	554	136	533	533	289	289
Volume Total	0	0	136	0	0	102
Volume Left	0	85	0	0	0	187
Volume Right	1700	1700	446	1700	1700	420
cSH	0.55	0.33	0.30	0.31	0.31	0.69
Volume to Capacity	0	0	32	0	0	127
Queue Length 95th (ft)	0.0	0.0	16.6	0.0	0.0	41.6
Control Delay (s)	0.0	0.0	1.9	0.0	0.0	41.6
Lane LOS	C					
Approach Delay (s)	E					
Approach LOS	E					
Intersection Summary						
Average Delay	4.8					
Intersection Capacity Utilization	60.4%					
ICU Level of Service	B					
Analysis Period (min)	15					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
59: Sheridan Drive & Proposed Access Driveway

4/24/2014



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	57	1747	1651	83	50	88
Volume (vph)	1900	1900	1900	1900	1900	1900
Ideal Flow (vpph)	75	0	0	0	0	0
Storage Length (ft)	1	0	1	0	0	0
Taper Length (ft)	25	25	25	25	25	25
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Flt Protected	0.950	0.993	0.914	0.982	0.982	0.982
Satd. Flow (prot)	1770	3539	3514	0	1672	0
Flt Permitted	0.950	0.982	0.982	0.982	0.982	0.982
Satd. Flow (perm)	1770	3539	3514	0	1672	0
Link Speed (mph)	45	45	30	30	30	30
Link Distance (ft)	697	971	280	280	280	280
Travel Time (s)	10.6	14.7	6.4	6.4	6.4	6.4
Adj. Flow (vph)	62	1899	1795	90	54	96
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)	62	1899	1885	0	150	0
Lane Group Flow (vph)	No	No	No	No	No	No
Enter Blocked Intersection	Left	Left	Right	Left	Right	Right
Lane Alignment	Left	Left	Right	Left	Right	Right
Median Width(ft)	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16
Two way Left Turn Lane	Yes	Yes	Yes	Yes	Yes	Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	Free	Free	9	15	9
Sign Control	Free	Free	Free	Stop	Stop	Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	63.1%					
Analysis Period (min)	15					
ICU Level of Service:	B					

Proposed Westwood Mixed Use Neighborhood Full Development Conditions - PM Peak Hour
59: Sheridan Drive & Proposed Access Driveway

4/24/2014



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	57	1747	1651	83	50	88
Volume (veh/h)	1900	1900	1900	1900	1900	1900
Sign Control	Free	Free	Free	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	62	1899	1795	90	54	96
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL TWLTL					
Median storage (veh)	2 2					
Upstream signal (ft)	971					
pX, platoon unblocked	0.63					
vC, conflicting volume	1885					
vC1, stage 1 conf vol	1840					
vC2, stage 2 conf vol	1073					
vCu, unblocked vol	1222					
IC, single (s)	4.1					
IC, 2 stage (s)	5.8					
IF (s)	2.2					
p0 queue free %	83					
cM capacity (veh/h)	355					
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	62	949	949	1196	688	150
Volume Left	62	0	0	0	0	54
Volume Right	0	0	0	0	90	96
cSH	355	1700	1700	1700	1700	265
Volume to Capacity	0.17	0.56	0.56	0.70	0.40	0.57
Queue Length 95th (ft)	16	0	0	0	0	80
Control Delay (s)	17.3	0.0	0.0	0.0	0.0	34.9
Lane LOS	C				D	D
Approach Delay (s)	0.5					
Approach LOS	D					
Intersection Summary						
Average Delay	1.6					
Intersection Capacity Utilization	63.1%					
Analysis Period (min)	15					
ICU Level of Service:	B					

Westwood Country Club Redevelopment Economic and Fiscal Impact

March, 2014

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Westwood Country Club Redevelopment

Economic and Fiscal Impact

March, 2014

SUMMARY

CGR was engaged by Mensch Capital Partners to estimate the economic and fiscal impact of their proposed Westwood County Club redevelopment in the Town of Amherst, NY. They propose investing over \$238 million in redeveloping the site that currently houses the Westwood Country Club. The table below summarizes their proposed development of the site:

Proposed Development of the Westwood Site	
Component	Acres
Mixed-Use Town Center	58.9
Commercial/Multi-Family Development	22.2
Office Park Development	15.2
River's Edge Townhomes	11.6
Lake Edge Townhomes	4.8
Clubhouse/Public Event Space	3.6
Hotel Development	1.5
Single Family Residential Subdivision	46.0
Patio Home Lots	27.2
Conventional Single Family Home Lots	20.7
Condominium Townhome Development	27.6
Creekside Conservation/Recreation Area	22.5
Senior Living Development	15.0

We estimate that this redevelopment will increase population by about:

- 1,600 residents in the Town of Amherst.
- 275 students in the Williamsville Central School District.

Economic and Fiscal Results

Over the ten years analyzed we estimate this will result in about:

- 2,300 jobs during the construction phase earning over \$115 million.
- Assuming that 25% of the businesses on site are new to the Buffalo market, we estimate 400 additional jobs once fully operational earning about \$17 million annually.
- \$51 to \$58 million in additional property tax revenue more than offsetting the \$25 million increase in the cost of government services, depending on whether the office park is taxed under a PILOT agreement.
- \$17 million in additional sales tax revenue for state and local government.
- \$10 million in additional income tax revenue to the State of New York.

Staff Team

Principal project support was provided by Mike Silva, Data Analyst. Mr. Silva handled draft reporting, data entry, primary analysis and provided methodological support.

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INTRODUCTION

CGR was engaged by Mensch Capital Partners to evaluate the economic and fiscal impact of their Westwood Country Club redevelopment project. The development is expected to bring residents and business to the town of Amherst, New York. CGR's task was to evaluate the impact of these changes.

Development Profile

The proposed development will be at the site of the Westwood Country Club in Amherst, NY, a town northeast of Buffalo, NY. The development will transform the golf course into the following mix of residential and commercial space:

1. **Mixed-Use Town Center Development (58.9 acres)** – This portion of the project is meant to serve as the commercial core of the site with primary access to Sheridan Drive. The following development types and density are anticipated:
2. **Mixed Use Town Center (22.2 acres- 352 residential units, 115,000 sq. ft. Neighborhood Business/Office space)** – This site is planned to feature approximately 115,000 sq. ft. of neighborhood business and office space within the first floor of mixed use buildings focused around the central plaza and hotel space. The buildings in this space will consist of 2 and 3 story structures that include upper story residential development totaling 352 units.
3. **Lake Edge Townhome Development (4.8 acres, 37 units total)** – This site is planned to have 37 townhome units developed along the central Westwood Lake and adjacent to the Town Center.
4. **Office Development (15.2 acres)** – This project component will be directly adjacent to Sheridan Drive, offering the most direct access to interstate options within close proximity to the site. This area is planned to contain 2-story medical and professional office buildings with approximately 200,000 total square feet of available space.
5. **River Edge Townhome Development (11.6 acres)** – This portion of the project will feature 56 rental townhome units in close proximity to the historic clubhouse that will provide both indoor and outdoor opportunities for public events and gatherings.

6. **Clubhouse/Public Event Space (3.6 acres)** – The existing Country Club features a historic clubhouse facility that will serve as a space for community events and banquets. Directly adjacent to the clubhouse will be a public gathering space and open green approximately 1.2 acres in size for outdoor events.
7. **Hotel Development (1.5 acre site, 130 rooms)** – The project will feature a 4-story 130 room hotel designed to be central to the Town Center development.
8. **Single Family Residential Subdivision (46 acres, 154 Lots)** – This subdivision is planned to include a mix of 108 patio home lots and 46 conventional single family lots to be serviced via new private roads that will be accessed off of the primary public right of way through the center of the development.
9. **Condominium Townhome Development (27.6 acres)** – This portion of the project is intended to be developed with adjacency to the single family subdivision and will feature 90 townhome units with a community center that can be accessed by both the single family subdivision and townhome residents.
10. **Creekside Conservation/Recreation Area (22.5 acres)** – This portion of the project will serve as the primary recreational opportunity for residents and adjacent neighbors. The park will include the Westwood Lake and Ellicott Creek corridor as significant natural features and will have a trail network extended and connected throughout the Westwood community.
11. **Senior Living Development (15 acres)** – This project component will feature a 200 room assisted living facility. In addition, the building will also contain 96 independent living apartment units, connected via building corridors to the central community services offered within the assisted living facility.

Outline of Report

The impact of this proposed development can be broken down into two parts. The first part is the construction phase. During the construction phase \$238 million will be invested in the site. This will be spent on labor and materials. It will provide temporary construction jobs and paychecks to the workers. The state will collect income tax, and there will be sales tax generated on the material spending. This impact will be temporary in nature, but will have a substantial impact on the economy.

Once the site is fully operational, the development will create jobs and deliver paychecks to the workers, about one quarter of whom are assumed

to be new to the region. There will be an increase in income tax, sales tax, occupancy tax and property tax revenues for local, state, and federal governments. There will also be an increase government services demand which will result in an increase the costs for providing government services.

This report details these economic and fiscal impacts. CGR focuses on the Buffalo metropolitan area (Erie and Niagara counties) as the level of analysis in determining the economic impact. New York State is the level of analysis for estimation of the fiscal impact.

CGR's report is presented in the following sections:

1. *Our Approach* provides explanations of terminology as well as the methodological procedures and assumptions CGR used to estimate the economic and fiscal impact.
2. *Estimated Impacts* provides the economic impact estimates for the development. The impact is estimated both in terms of employment and labor income. CGR also provides estimates of the fiscal impact in terms of sales, occupancy, income and property tax revenue generated along with estimates of the costs of community services in this section.

OUR APPROACH

Terminology

Region

Throughout the report there is reference to “the region.” The impact region is assumed to be the Buffalo-Niagara Falls Metropolitan Statistical Area (Erie and Niagara counties).

Direct Impact

Westwood County Club redevelopment project's direct economic impacts on the regional economy (measured by CGR in terms of jobs and income) are a result from both construction and operation spending. For example, investing in the construction of the hotel will generate temporary construction jobs and is a direct impact. Additionally, employing staff to run the hotel once it is built results in an ongoing direct impact to the economy.

Spillover Impact

Spillover expenditures result from the subsequent spending of the recipients of the direct expenditures. For example, a company that supplies a product or service to the hotel uses the proceeds of that sale to make expenditures of their own, typically for both materials and labor. Similarly, when employees of the hotel spend their wages, these become income for other businesses. Both of these types of expenditures are jointly referred to as spillover impacts.

Methodology & Assumptions

Population Impact

The proposed development has a residential component. We assume full occupancy of all the housing units with the exception of the senior living development, which is assumed to maintain 95% occupancy. We assume each housing unit holds one household. We further assume that all of these households represent an increase in the population of the town and the Williamsville School District.

Using the most recent census data we estimate the number of people in a household based on the housing type (rental vs owner occupied). The household size in owner occupied housing was estimated by reference to detailed demographic information by home value. We applied these ratios to the number of housing units to get estimates of the residents. Since some of the senior living development units are one room, we assumed single occupancy. The following table summarizes the number of people per type of housing units used in the model:

People per Housing Unit Ratio Assumptions	
Housing Type	People per Unit
2 Room Rental Unit	1.1
Owner Occupied Home	
\$175,000 - \$199,999	2.9
\$250,000 - \$299,999	3.2
\$300,000 - \$399,999	3.3

Source: U.S. Census Bureau 2007-11 PUMS (Buffalo MSA)

To estimate the number of school-age children we used the latest census data, which indicates there are 0.4 school age children per occupied housing unit. This very low ratio is consistent with CGR's previous experience with the Town of Amherst and is consistent with the long standing trend of decline in the share of school-age children in the town. We applied this ratio to all housing units except those within the senior living development to estimate the number of school age children.

Economic Impact

Employment & Labor Income

CGR used IMPLAN, a regional input-output modeling system, for estimating the economic impact. IMPLAN is widely acknowledged as one of the best models of economic activity available. The IMPLAN database, created by MIG, Inc., consists of two major parts: 1) a national-level technology matrix and 2) estimates of sectorial activity for final demand, final payments, industry output and employment for each county in the U.S. along with state and national totals. Data are updated annually. IMPLAN estimates the direct, indirect and induced impacts of economic change through the use of multipliers, and estimates the impact of an increase in demand in a particular sector on 440 different industries/sectors of the local economy.

Employment estimates were supplied to CGR by Mensch for the senior living development. Hotel employment was estimated using IMPLAN multipliers applied to the estimated hotel revenue. Employment for all other components were estimated applying average square footage per worker ratios developed for the types of space. The following table summarizes the square footage, the square footage by worker ratio and the estimated workers:

Workers Estimated by Square Footage by Use			
	Square Footage	Square Foot per Worker	Estimated Workers
Total	603,400	N/A	776
Food Sales	7,500	877	9
Food Service	22,500	528	43
Retail	60,000	1,246	48
Office	230,000	434	530
Service	30,000	1,105	27
Hotel*	99,100	N/A	48
Senior Care*	155,800	N/A	73

**Estimate of direct employment not determined on a staff per square foot basis*

We assumed that 25% of the jobs would be new to the region and 75% would be a relocation from somewhere else in the region.

Fiscal Impact

Income Tax

We estimated the income tax revenue using the latest available effective income tax rates published by the NYS Department of Taxation. These

figures allow CGR to estimate average tax liability by income class. We applied the tax rate for the Buffalo metro to the estimate income.

Sales Tax

We estimated sales tax revenue due to employee spending by applying the sales tax rate (8.75%) to the estimated share of income spent on sales taxable goods and services. For the sales tax revenue from project spending we applied the sales tax rate to the estimated share of construction spending subject to sales tax.

Property Tax

All property tax modeling uses tax rates that reflect changes in the cost of government services and assessed value. We assume that the total project assessed value after development to be \$230 million, although this will be determined by the assessor. From that, we estimate the property tax revenue for the Town of Amherst, Williamsville Central School District, and Erie County. These figures are presented with a PILOT agreement and without. When presenting the PILOT scenario we assume that the 200,000 square foot office park is the only component to which the PILOT is applied.

Occupancy Tax

We estimate the occupancy tax using average daily room and occupancy rates data provided by Mensch.

Cost of Community Services

Local government service costs can best be described as a “step function.” Costs increase significantly at discrete points in time as existing capacity is consumed and a costly expansion of capacity is required.

Nearly every service provided by local government has a substantial “fixed cost” component. The cost imposed by adding a single person, dwelling unit or commercial building is less than the average cost (the total cost divided by the number of persons, units or commercial square feet).

CGR analyzed the budget impact on town services for both residential and commercial separately. We assume a variable impact on each line item of the budgets (townwide, town outside village, highway) based upon CGR’s experience and best estimate of marginal impact when new people and/or houses come into the community. Each item of the budget is assumed to be impacted by residential development and commercial development.

CGR analyzed the budget impact on the county services using the same approach used with the town. We assigned reasonable assumptions of the impact this development in Amherst would have on each line item.

Based on CGR's previous experience with Williamsville Central School district we anticipate that they have the capacity to accommodate the additional school age children that were estimated. NYSED estimates a cost per child of about \$8,100 (after state aid) for the school district. We use this figure to estimate the fiscal impact.

The fiscal impact model does not attempt to forecast changes in the real cost of community services; the only question the model addresses is the tax impact from a change in the number of school children, people or businesses. The costs were held constant.

Discount Rate

When presenting the ongoing fiscal impact we modeled it over 10 years which is the length of the Town of Amherst IDA standard PILOT agreement. We assumed a 2% discount rate.

ESTIMATED IMPACTS

Population Impact

The following table summarizes the estimated change in population that will result from the addition of the residential housing:

New Residents Assumptions and Estimates

Component	Housing		People / Household	New Residents	New Children
	Units	Households			
Total	1,029	1,010	1.6	1,581	275
Mixed-Use Town Center	489	489	1.1	551	183
Mixed-Use Apartments	352	352	1.1	396	132
River's Edge Townhomes	100	100	1.1	113	37
Lake Edge Townhomes	37	37	1.1	42	14
Single Family Residential Subdivision	154	154	3.2	491	58
Patio Home Lots	108	108	3.2	341	40
Conventional Single Family Home Lots	46	46	3.3	150	17
Condominium Townhome Development	90	90	2.9	262	34
Senior Living Development	296	277	1.0	277	0

The Westwood project is planned to add over 1,000 housing units and households. We estimate the addition of about 1,600 residents based on census data. Using the children per occupied housing unit in the Town of Amherst we anticipate a total of about 275 new school age children to the Williamsville Central School District.

Economic Impact

Construction Phase Impact

During the construction phase there will be a substantial but temporary impact on the economy. The following table summarizes the economic impact during the construction phase:

Temporary Construction Impact (dollars in millions)			
	Direct	Spillover	Total
Employment	1,600	700	2,300
Labor Income	\$81.2	\$33.9	\$115.1

The project's construction spending will support about 1,600 annual FTE construction jobs. Spending by their suppliers will support an additional 700 jobs for a total impact of 2,200 jobs.

This project will result in an estimated \$115 million of income for workers. The construction workers will be paid about \$81 million dollars in total. The spillover effect will total about \$34 million for the 700 workers.

Operational Phase Impact

Once operational the Westwood project will have a sustained impact on the regional economy. A key assumption here is that about one-quarter of the businesses will be new to the regional economy. If the development serves as a catalyst for an expansion in regional economic activity and brings a larger proportion of new activity, the impacts will be greater. To the extent that the development simply displaces economic activity already taking place in the metro area, these impacts will be much smaller. The fiscal impacts for the Town of Amherst are more easily predicted, however, and are very likely to occur.

The following table summarizes what the impact will be on an annual basis:

Annual Permanent Impact (dollars in millions)			
	Direct	Spillover	Total
Employment	200	200	400
Labor Income	\$10.4	\$6.4	\$16.8

The Westwood project is assumed to add about 200 new jobs to the region. The spending by these companies and their employees will spur

on an additional 200 jobs in the local economy for a total impact of approximately 400 additional jobs.

Each year employees working at the site will earn in total around \$10 million. After adding in the spillover income of \$6 million, the region could expect an additional \$16 million in income each year.

Fiscal Impact

Revenue

Income Tax

The labor income outlined in the previous section will generate income tax revenue for New York State. The following table summarizes the present value of the income tax receipts during the two phases:

Income Tax Revenue (dollars in millions)			
	Direct	Spillover	Total
Construction Phase	\$3.0	\$1.3	\$4.3
Operational Phase*	\$3.5	\$2.0	\$5.5

* Figures over 10 years and discounted by 2%

A total of about \$4 million will result from the construction phase. 70% of it will come from the construction workers and the remaining 30% will be from the supporting firms' workers.

Once operational, New York State will receive a new stream of income tax revenue from firms located on site. We estimate that the present value of ten years of income tax revenue totals about \$6 million. \$4 million is due directly to the employees at the Westwood project.

Sales Tax

Sales tax revenue will be generated during both the construction and operational phase. The table below summarizes the sales tax revenue:

Sales Tax Revenues (dollars in millions)	
Total Sales Tax Revenue	\$16.5
Construction Phase	\$11.8
Project Spending	\$8.3
Employee Spending	\$3.5
Operational Phase*	\$4.7

* Figures over 10 years and discounted by 2%

Project spending on materials during the construction phase will result in an estimated \$8 million in sales tax revenue for the state and the local governments. As labor income is spent it will also generate sales tax

revenue. Employee spending will generate about \$4 million in sales tax revenue total during the construction phase.

Once operational, employee spending will have a fiscal impact as well. The present value of 10 years of additional sales tax revenue is estimated to be a little under \$5 million in total.

Occupancy Tax

The onsite hotel will collect occupancy tax once operational. CGR estimates ten years of occupancy tax revenue to have the present value of about \$2 million.

Property Tax

The development will also result in an increase in property tax revenue. We present the following two scenarios: one with a PILOT agreement and one without. The following table summarizes what additional revenue could be expected:

Additional Property Tax Revenues (dollars in millions)*

Scenario	Town of Amherst	Williamsville School District	Erie County	Total
No PILOT	\$9.0	\$38.5	\$10.6	\$58.1
With PILOT**	\$7.8	\$33.6	\$9.2	\$50.6

* Figures over 10 years and discounted by 2%

**PILOT only applied to the office park component of the development

Under the no PILOT scenario, 10 years of property tax revenue would have the present value of about \$58 million.

For the PILOT, we abated the office park using the Town of Amherst's IDA 10 year property tax abatement. The present value of ten years of property tax revenue would total a little under \$51 million.

Fiscal Impact Summary

The development of the Westwood site is expected to spur a significant increase in tax revenue. Over the next ten years the present value of the revenue totals about \$86 million as summarized below:

Fiscal Impact - Revenues (dollars in millions)	
Total Revenues	\$86.3
Income Tax	\$9.8
Construction Phase	\$4.3
Operational Phase*	\$5.5
Sales Tax	\$16.5
Project Construction Spending	\$8.3
Employee Spending	\$8.2
Construction Phase	\$3.5
Operational Phase*	\$4.7
Occupancy Tax*	\$1.9
New Property Tax*	\$58.1

* Figures over 10 years and discounted by 2%

Cost of Government Services

The cost of government services to support this new development over ten years has a present value of about \$25 million. The following tables summarize the breakout of the costs and compares it against the revenue expected without and with a PILOT agreement:

Estimated Costs vs Revenue (dollars in millions)*

	Cost of Services	Revenue	Difference
Total	\$25.1	\$58.1	\$33.0
Town	\$2.9	\$9.0	\$6.1
School District	\$20.5	\$38.5	\$18.0
Erie County	\$1.7	\$10.6	\$8.9

* Figures over 10 years and discounted by 2%

Estimated Costs vs Revenue with PILOT (dollars in millions)*

	Cost of Services	Revenue	Difference
Total	\$25.1	\$50.6	\$25.5
Town	\$2.9	\$7.8	\$4.9
School District	\$20.5	\$33.6	\$13.1
Erie County	\$1.7	\$9.2	\$7.5

* Figures over 10 years and discounted by 2%

We estimate that the property tax under either a PILOT scenario or no PILOT scenario is more than adequate to cover the increased costs for providing community services for all taxing jurisdictions.

Summary

This report estimates the fiscal and economic impact of the redevelopment proposed for the Westwood Country Club in Amherst NY.

The redevelopment will have a short term impact during the construction phase of the project and an ongoing impact once operational. Over the ten years modeled, CGR estimates it will result in about:

- 1,600 new residents to the Town of Amherst.
- 275 new students in the Williamsville Central School District.
- 2,300 jobs during the construction phase earning over \$115 million.
- 400 jobs once fully operational earning about \$17 million annually.
- \$51 to \$58 million in property tax revenue (depending on the PILOT).
- \$25 million increase in the cost of government services.
- \$17 million in sales tax revenue.
- \$10 million in income tax revenue.
- \$2 million in occupancy tax revenue.